

*Dehcho Regional*



*Wildlife Workshop*



*Final Report*



*Fort Simpson, October 19-20, 2004*

**Dehcho Regional Wildlife Workshop**  
**October 19-20<sup>th</sup>, 2004**

**Delegate Participants**

Gordon Timbre - Acho Dene Koe Band, Fort Liard  
Ernest Timbre - Acho Dene Koe Band, Fort Liard  
Angus Sanguetz - Jean Marie River First Nation  
Boris Sanguetz - Jean Marie River First Nation  
James Tonka - Nahanni Butte Dene Band  
Dennis Deneron - Sambaa K'e Dene Band, Trout Lake  
Andrew Lomen - Sambaa K'e Dene Band, Trout Lake  
Jonas Lafferty - Fort Simpson Métis Local  
Marie Lafferty - Fort Simpson Métis Local  
Edward Cholo - Liidlíi Kue First Nation, Fort Simpson  
Robert Hardisty - Liidlíi Kue First Nation, Fort Simpson  
Gabe Hardisty - Pehdzeh Ki First Nation, Wrigley  
Albert Moses - Pehdzeh Ki First Nation, Wrigley  
Peter Sabourin - Katlodeeche First Nation, Hay River Reserve  
Robert Lamalice - Katlodeeche First Nation, Hay River Reserve  
Karen Felker - West Point First Nation  
William Michelle - West Point First Nation  
Lloyd Chicot - Ka'a'gee Tu First Nation, Kakisa  
George Simba - Ka'a'gee Tu First Nation, Kakisa  
Melanie Thom - Deh Gah Gotie Dene Band, Fort Providence

**RWED Participants**

Nic Larter - Dehcho Regional Biologist, Fort Simpson  
Danny Allaire - Dehcho Wildlife Technician, Fort Simpson  
Deborah Johnson - South Slave Regional Biologist, Fort Smith  
Robert Mulders - Carnivore/Fur Biologist, Yellowknife  
Suzanne Carriere - Ecosystem Management Biologist, Yellowknife

**Nahanni National Park Reserve Participants**

Doug Tate - Conservation Biologist, Fort Simpson  
Steve Catto - Parks Expansion Officer, Fort Simpson

### **Local Participants**

Phoebe Allaire – Liidlíi Kue First Nation  
Jonas Antoine – Nahanni Expansion Working Group  
Florence Brown – Liidlíi Kue First Nation  
Michael Cazon – Liidlíi Kue First Nation  
Peter Corneille – Liidlíi Kue First Nation  
Derek Neary – Fort Simpson  
Bob Norwegian – Liidlíi Kue First Nation  
Leo Norwegian – Liidlíi Kue First Nation  
John Renaud – Liidlíi Kue First Nation  
Lee Thom – Dehcho First Nation  
Frank Tsetso – Liidlíi Kue First Nation

Interpreter: Joe Tambour, Hay River

Sound provided by Mike Chemerys and MJC Sound Inc.

Lunches and coffee breaks were catered by the Thomas Simpson School

On 19-20 October, 2004, the Department of Resources, Wildlife & Economic Development (RWED), Dehcho Region held a Regional Wildlife Workshop at the Cultural Centre in Fort Simpson. This workshop occurred roughly two years after an inaugural Regional Wildlife Workshop, co-sponsored by Dehcho First Nations (DFN) and RWED, in September, 2002. The direction for wildlife research in the Dehcho and a list of 12 action items were the key results of the 2002 workshop. The goals of the 2004 workshop were to:

- 1) provide an update of the wildlife research that RWED had initiated and conducted in the Dehcho since the 2002 workshop,
- 2) provide an assessment of how well RWED had addressed the 12 action items,
- 3) provide a forum for other agencies and other RWED programs to present research findings,
- 4) provide an open forum for the discussion of regional wildlife issues, and
- 5) ensure a continued dialogue about research and monitoring programs between all Dehcho First Nations and RWED.

During Day 1, RWED made a presentation detailing how they had addressed each of the 12 action items from the 2002 workshop. This was followed by presentations on the major research programs being conducted by RWED and presentations from Parks Canada on research and the proposed park expansion. The walls of the Cultural Centre were covered with posters showing the results of wildlife research programs that had been initiated since 2002. The posters became focal points during coffee and lunch breaks and during round table discussion sessions. Day 2 started with an initial RWED presentation followed



by open round table discussions on a variety of wildlife research topics and issues and feedback from delegates on any and all wildlife-related topics. The workshop was extremely well attended, and RWED would like to take this opportunity to thank all of those First Nations whom sent delegates to the workshop. What follows is the final workshop agenda, the key discussion items and comments that came forth during the workshop, and some action items for RWED to pursue. The discussion items are not listed in any particular order.

### **Day 1 – 19 October, 2004**

- 0920 Opening Prayer-Jonas Antoine
- 0925 Introductions
- 0935 Welcoming Comments-Paul Kraft, Regional Superintendent, RWED
- 0955 Review of 2002 workshop action items-Nic Larter
- 1030 Coffee Break
- 1050 Boreal Caribou Northwest Territories-wide-Deborah Johnson
- 1150 Lunch catered by TSS
- 1315 Species at Risk-Suzanne Carriere
- 1345 Dehcho Caribou Program-Nic Larter
- 1415 Dehcho Moose Program-Nic Larter
- 1450 Coffee Break
- 1510 Dehcho Youth Ecology Camp-Danny Allaire
- 1525 Dehcho Bison Program-Nic Larter
- 1545 Wildlife Research Nahanni National Park Reserve-Doug Tate
- 1615 Nahanni Park Expansion-Save Catto
- 1645 Specific discussion topics handout and Closing Prayer-Jonas Antoine

## **Day 2 – 20 October, 2004**

- 0910 Opening Prayer-Gabe Hardisty
- 0915 Monitoring Furbearer Populations in the NWT-Robert Mulders
- 0945 Round table discussions on trapping and furbearer research
- 1045 Coffee Break
- 1055 Round table discussions on moose/caribou research
- 1200 Lunch catered by TSS
- 1315 Round table discussions of youth ecology camps
- 1400 Round table discussions about collaring, capturing, and handling animals
- 1445 Coffee Break
- 1505 Round table discussion on potential action items/current and future workshop formats
- 1615 Workshop closing comments and Closing Prayer-Gabe Hardisty

### **Day 1**

The presentation of how RWED had addressed the 12 action items resulting from the September 2002 workshop stimulated discussion on a few topics.

#### **RWED in the schools**

There were questions about whether RWED staff would be available to go to the schools to make presentation and participate in educational activities. There were questions about where to direct requests for RWED staff to participate in such schooling activities. Cultural camps have been established throughout the Dehcho by various groups in order to get youth back out on to the land and so that youth can experience being out on the land. Would RWED be willing to provide training and/or expertise at such cultural camps on a short-term basis? It was indicated that requests need to be made to local RWED offices and that RWED is more than willing to look at any of these kinds of requests and to participate wherever possible given staff commitments.

#### **Bison**

There was concern about the lack of a proper management plan being in place for the Nahanni Bison Herd. With the herd expanding in numbers and the area of their range increasing there was concern that it was encroaching on local moose populations and either causing moose numbers to decline or cause moose to move further away from the river during summer. There was discussion on the need for a boundary, similar to those for the Mackenzie Herd, beyond which animals would be removed. It was indicated that RWED also agreed that there was a need for a more structured management plan and that community meetings would be necessary in order to properly address the issue. RWED also noted that there was a draft protocol for bison-motor vehicle



collisions that had been used this fall with the 3 unfortunate collisions. The protocol includes biological sampling, meat salvage, and information on road conditions and vehicle descriptions.

There was also concern that since the fires in the 1990s bison would utilize more of the Horn Plateau, especially areas that had been caribou habitat prior to the fire and that this would displace caribou.

### **Big Game Outfitters**

There was the belief that RWED's current methods of monitoring big game outfitter harvests were inadequate and that there needed to be either more active monitoring by RWED or the need for local monitors to accompany the outfitters and verify harvest. Local monitors could provide an opportunity for youth to learn from the experience of hunting in the mountains and they could make dry meat while in camp. It was indicated that RWED was unable to go out and make regular checks on all 8 outfitters at their camps during summer. RWED indicated that all animals harvested by the outfitters had to be reported and that the Dehcho office received all outfitter harvest forms and produced a detailed annual report of the non-resident harvest.

There was concern that sport hunting was removing all the seed animals and causing weakened populations. RWED indicated that historical harvest results and the additional horn measurements and voluntary observation information provided by the outfitters does not indicate weakened populations and that if trophy animals were not present clients would not be hunting.



There was the misconception that outfitters were rich and were only hunting for money. It was indicated that outfitters spread their harvest effort throughout their zones in order to maintain healthy harvestable populations, like trappers spreading their effort amongst different lines. There was the familiar comment about the lack of local guides being hired by outfitters. RWED indicated that it is well aware of this complaint and that they are also aware of instances where outfitters have been unable to find local guides or that guides have not been willing to work the whole season.

There was a feeling that there needed to be more "zonal management", that outfitter zones were too large and the areas needed to be split because smaller areas are easier to manage.

## **Day 2**

### **Trapping and Furbearers**

Many participants shared stories about trapping in the glory years before the advent of anti-fur campaigns. There was consensus around the table that the trapping industry had undergone some drastic changes over the past 10-15 years, and that these changes had been forced upon the industry by pressures from outside the Northwest Territories and outside Canada. These changes had made trapping as a way of life virtually impossible. The change from leghold to conibear traps, which are bigger, bulkier, and more difficult to set, was seen as a key adjustment that reduced the number of active trappers.

There was consensus that RWED should talk with and work with trappers in the communities to understand why trappers are not trapping and to come up with some basic cooperative research and monitoring programs that trappers could

participate in. The high costs related to trapping and the relatively low fur prices are creating hardships for trappers.

There was comment that if one was trapping nowadays for just the money it was not going to work because one can't make money trapping. However, if the reasons for trapping were not material but for a healthy, active lifestyle for trappers and their families and for a more spiritual existence with the land then trapping was still a very appealing lifestyle.

Delegates wanted RWED to continue promoting and supporting the trapping industry and providing trapper training course that looked at other humane methods of capturing wildlife.

There was reference that the financial assistance provided by RWED to local bands in support of hunters and trappers was not being disbursed by the bands to those trappers that really needed the assistance.

It was felt that RWED should strive to make a better connection with traditional harvesters who have established family camps on the land so that cooperative programs from monitoring animal tracks to culture camps could be established.

### **Moose**

There was consensus around the table that conducting the baseline moose surveys in winter 2003-04 was important but there was a need for an ongoing moose monitoring program, which were good programs and need to be supported.

It was pointed out that there was no earlier population estimate on which RWED could compare their survey results and given the numbers that RWED had presented only local harvesters had the knowledge of population trend.

There was consensus from participants that the moose numbers RWED reported from their surveys in winter 2003-04 were lower than in previous years (especially the 1970's before the Liard Highway) and the only place in the Dehcho where moose numbers had remained relatively stable was around Blackwater and between Wrigley and Tulita.

There was concern that bison and the Liard Highway had caused the decline in moose numbers in the Liard Valley, where moose had been plentiful.

There was concern amongst the participants that the old traditional ways of harvesting animals (particularly moose) were being lost and that an abuse of treaty rights and lack of respect for the resource were responsible for decreased moose numbers. There was concern that local hunters were not harvesting only what they needed any more and that too many cows were being taken.

It was noted that every hunter has a unique respect for and thoughts about the animal they are hunting. Everyone has different thoughts.

There was consensus among participants that there needed to be more monitoring of the moose harvest and that this monitoring should be "self-management" initiated by the local bands so that they could monitor their membership. There was a need to demonstrate that such a program could be



community driven as everyone has a vested interest in maintaining healthy moose populations.

There was active discussion as to how best to initiate or conduct a "self-management" program with agreement that the time for local monitoring was now. Self-management should be something supported by but not regulated by RWED. There was discussion on local harvest studies being conducted in other regions as part of their land claims agreements.

There was comment that road enforcement would be an effective way to monitor moose harvest.

### **Boreal Caribou**

Again a concern was raised about the lack of respect for hunting caribou and the abuse of hunting rights. Local rumors indicate the abuse and the possible need for local monitoring and enforcement.

There is a need to have community members monitor the carcasses of harvested animals for abnormalities. RWED indicated that now as in the past they would investigate any abnormalities that are discovered in harvested wildlife and encourage harvesters to contact them if abnormalities are discovered. RWED also indicated that they were trying to get a program going that would collect various biological samples from harvested caribou.

There was concern that boreal caribou numbers are declining.



There was general approval of the boreal caribou research program initiated by RWED, but there were many questions surrounding the handling of animals which was necessary in order to put radio collars on them. There was a lengthy discussion by RWED staff with experience handling caribou (and other wildlife) with net guns or darts on the advantages and disadvantages of netting versus drugging wildlife. They also discussed how to keep stress on wildlife to a minimum.

There was some concern that the locations of caribou being tracked by satellite collars could be acquired by outside parties who would misuse the information, or that other people would be able to track the caribou collared in the region. RWED indicated that other people would not be able to come up and track animals in the region because there would be no access to the radio frequencies the collars used. RWED agreed that there was the need to manage the timing and accessibility of raw caribou location information, and that they were working with Trout Lake specifically on how to share the information because it was useful to their Traditional Knowledge Study and for land use planning. RWED indicated that it takes time for the raw location data that is received from a satellite to be transformed into usable maps, and therefore all location information that could possibly be made public would have a time delay.

### **Youth Ecology Camp**

There was much discussion and interest about the current summer youth ecology camp. There was consensus that the camps in 2002 and 2003 were a success but there were also discussion about changing the location of the camp, changing the timing of the camp, changing the format/curriculum of the camp. RWED indicated that the camps were jointly funded and run with DFN and that

because the first camps were to highlight activities including traditional and scientific knowledge and funding came on short notice there was a need for a base camp with adequate infrastructure and easy accessibility and so Trout Lake Base Camp was chosen.

RWED indicated that they had been discussing with DFN possible changes to the format of and location of these camps and, that any and all comments for the participants would be useful in assisting them in pursuing such changes. Other suggested locations for camps were Fisherman Lake, Sandy Creek, Fish Lake, Willow Lake, Blackstone, and Telemia Healing Camp.

It was suggested that by changing the timing of the camp from summer to spring, winter, or fall would permit a greater variety of traditional and scientific activities to expose youth to. There were discussions on how to balance between a really "roughing it" camp without any luxuries from town and a "not roughing it camp". It was agreed that would depend upon what the key focus of the camp was. There was suggestion that camps could run almost exclusively in Slavey, that camps run for longer than 1 week, that camps target different and specific age groups, and that more than one camp a year be conducted.

It was proposed that hosting camps should go out to tender. This would permit the utilization of traditional homesteads in the region and would provide the opportunity and encouragement for traditional families to fix up and improve traditional areas. Camps could be kept simple and authentic.

There was discussion about whether or not there was a the need for training for any and all staff that would be working with youth, and whether or not there

should be rigorously structured programming and the need for staff orientation prior to the camps.

### **Miscellaneous Topics of Discussion**

There was concern about the lack of an all encompassing wildlife management board in the Dehcho. Delegates suggested that there is a need for RWED to fund a Dehcho wildlife management board with membership of all First Nations. The need for this board is now since there is currently no land claim.

There was consensus that the regional wildlife workshops are a very good idea and that they need to be continued at least every two years. The timing of this workshop was good and should be kept for future workshops as it comes at a time when people are not out on the land as much as it is after fall hunting time.

There is a need to continue to involve youth and elders at these wildlife workshops. There were fewer elders participating at this workshop than the one in 2002, but it was good to see younger delegates attending.

There needs to be more common sense used by all involved in wildlife issues, especially appropriate harvesting and that common sense has to start at home with family.

There was concern that some currently issued land leases were encroaching on traditional community trapping areas.

There was a discussion lead by RWED to explain why certain biological samples need to be collected and what information they provided. Of particular

importance are the teeth which determine the age of animals, the kidney and liver which indicate the amount of and type of contaminants found in wildlife, the poop which tells us about diet and parasites, the bone marrow which gives us an idea of animal fatness, and small pieces of muscle which can be used in DNA analyses.

#### **Action Items**

1. RWED needs to ensure that the Final Report of this workshop is distributed to all First Nations in a timely basis.
2. RWED needs to ensure that these workshops become a biannual event and that participation by elders and youth of the region is actively supported and encouraged.
3. RWED needs to ensure that a bison management plan is developed for the Nahanni Bison Herd.
4. RWED needs to initiate discussions with trappers in the communities of the Dehcho, to stimulate cooperation in conducting basic research and monitoring programs.
5. RWED needs to discuss changes and modifications to the current youth ecology camp location, timing, and format with local communities and DFN and investigate other available options.
6. RWED needs to continue to promote and support community wildlife monitoring programs.
7. RWED needs to support any self-management programs related to wildlife harvest that may be initiated by local First Nations.



## **Appendices**

The following appendices are copies (4 slides to a page) of the presentations made during the workshop in the order they were presented. Digital versions of these presentations are provided on the cd that is included with this final report. There is also a digital copy of the 2004 Youth Ecology Camp on the cd. This report was reviewed during the workshop.

- 1) Update on action items arising from the September 2002 Workshop
- 2) Boreal Caribou research in the NWT (excluding the Dehcho)
- 3) Overview of the Species at Risk Accord
- 4) Dehcho Boreal Caribou research program
- 5) Dehcho Moose research program
- 6) Nahanni Bison research program
- 7) Wildlife research in Nahanni National Park Reserve
- 8) Overview of the Nahanni Expansion Working Group and Park Expansion
- 9) Furbearer research in NWT

**Dehcho Regional Wildlife Workshop  
Fort Simpson, NT  
19-20 October, 2004**



In September, 2002, The Department of Resources, Wildlife & Economic Development (RWED) and Dehcho First Nations (DFN) jointly hosted a Regional Wildlife Workshop in Fort Simpson.

The main purpose of the workshop was to discuss regional wildlife issues and to provide RWED with direction for wildlife research in the region. RWED had just initiated a Biological Program by staffing a Regional Biologist and Wildlife Technician.

At the end of the workshop 12 follow-up activities were recommended by the delegates in attendance.

What follows is a description of the activity and the action by RWED on each item.

**Item #1**

Ensure that the summary and hard copies of the presentations covered at the workshop are distributed to all Dehcho First Nations.

*Action:*  
Copies were forwarded to all First Nations by 1 November 2002

**DEHCHO REGIONAL WILDLIFE WORKSHOP**

CO-HOSTED BY

DEHCHO FIRST NATIONS

AND

RESOURCES, WILDLIFE & ECONOMIC DEVELOPMENT

September 23-25, Fort Simpson



**Item #2**

Arrange meetings and discussions with those First Nations that were unable to send delegates to the Workshop (Trout Lake, Kakisa, Fort Liard). For Kakisa the Regional Biologists from the South Slave and the Dehcho should attend.

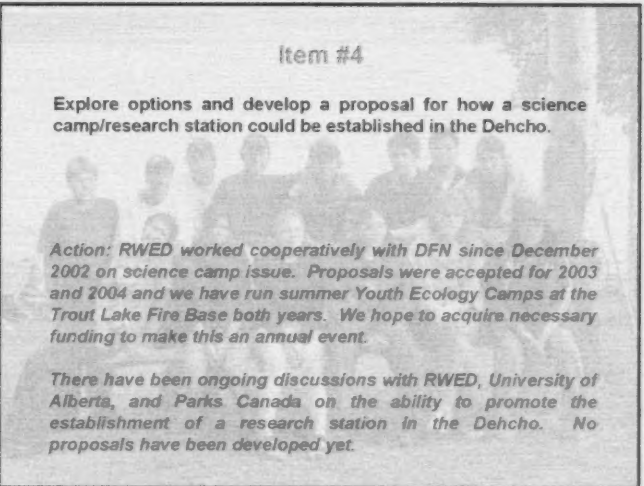
*Action:* Met with Trout Lake on 6 November, 2002. Met with Kakisa on 8 and 21 January, 2003, both regional biologists attended. Unable to schedule formal meetings with Fort Liard but had follow-up phone correspondence and informal meetings in conjunction with summer bison classification surveys. A formal meeting was conducted in July 2004.



### Item #3

Circulate letters to schools in the Dehcho indicating that there is now a Regional Biological Program with RWED and that they are available to make school presentations if requested.

*Action: A letter was circulated 2 November, 2002. There have still been no formal responses or requests. Staff have participated in presentations in local schools related to other programs (Edehzhie Protected Area).*

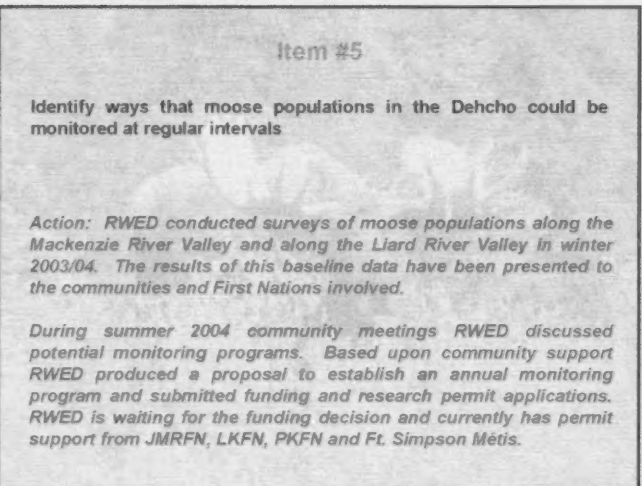


### Item #4

Explore options and develop a proposal for how a science camp/research station could be established in the Dehcho.

*Action: RWED worked cooperatively with DFN since December 2002 on science camp issue. Proposals were accepted for 2003 and 2004 and we have run summer Youth Ecology Camps at the Trout Lake Fire Base both years. We hope to acquire necessary funding to make this an annual event.*

*There have been ongoing discussions with RWED, University of Alberta, and Parks Canada on the ability to promote the establishment of a research station in the Dehcho. No proposals have been developed yet.*

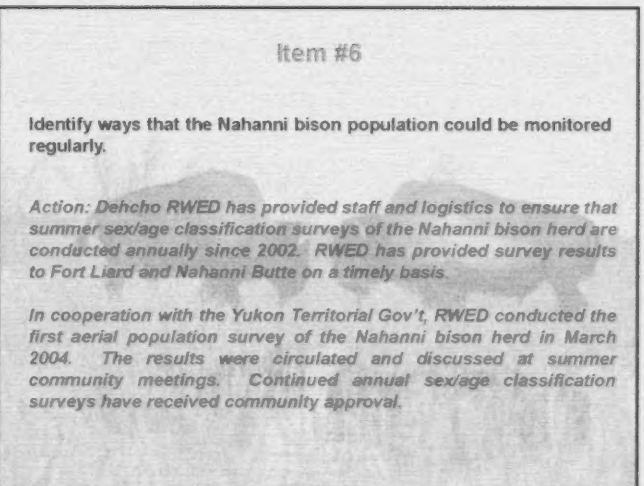


### Item #5

Identify ways that moose populations in the Dehcho could be monitored at regular intervals

*Action: RWED conducted surveys of moose populations along the Mackenzie River Valley and along the Liard River Valley in winter 2003/04. The results of this baseline data have been presented to the communities and First Nations involved.*

*During summer 2004 community meetings RWED discussed potential monitoring programs. Based upon community support RWED produced a proposal to establish an annual monitoring program and submitted funding and research permit applications. RWED is waiting for the funding decision and currently has permit support from JMRFN, LKFN, PKFN and Ft. Simpson Métis.*



### Item #6

Identify ways that the Nahanni bison population could be monitored regularly.

*Action: Dehcho RWED has provided staff and logistics to ensure that summer sex/age classification surveys of the Nahanni bison herd are conducted annually since 2002. RWED has provided survey results to Fort Liard and Nahanni Butte on a timely basis.*

*In cooperation with the Yukon Territorial Gov't, RWED conducted the first aerial population survey of the Nahanni bison herd in March 2004. The results were circulated and discussed at summer community meetings. Continued annual sex/age classification surveys have received community approval.*



#### Item #7

Identify ways that the status of boreal caribou in the Dehcho could be clarified and the potential impacts of oil and gas exploration and development on boreal caribou could be studied in the Cameron Hills area and possibly other key areas in boreal caribou range in the Dehcho.

*Action:* As part of an NWTwide program for boreal caribou, collaring programs were initiated by RWED in the Kakisa and Trout Lake areas as well as areas in the Sahtu and Inuvik Regions. 10 females were outfitted with satellite collars in the Trout Lake area and 30 females were outfitted with conventional VHF collars. RWED is using these animals to monitor seasonal movements and distribution, calf production/survival, and adult survival.

#### Item #8

Identify ways that community based monitoring of wildlife health could be implemented in the Dehcho.

*Action:* RWED participated with Dehcho communities in the contaminant program headed by the Dene Nation. At community meetings RWED has proposed the collection of various biological samples from harvested wildlife to monitor wildlife health. RWED has proposed a moose monitoring program for this year which would monitor moose health. RWED would like to establish a program of biological sampling from harvested boreal caribou.

RWED has encouraged harvesters to report harvested wildlife that does not appear normal. When samples have been received diagnoses has been made by RWED staff or from the appropriate wildlife laboratory.

#### Item #9

Identify ways that monitoring of the harvest in the Dehcho could be enhanced.

*Action:* Dehcho RWED monitors the annual non-resident harvest in the Mackenzie Mts and publishes a detailed annual report of the harvest. RWED-HQ is responsible for monitoring resident harvest based upon questionnaire returns.

Dehcho RWED has discussed the topic of improved monitoring of community harvest (beyond collecting biological samples from a few harvested animals) at local meetings. This is a topic that needs to be further explored. Other regions have wildlife harvest studies which document the numbers and types of country foods harvested by community residents.

#### Item #10

Identify appropriate indicators for monitoring and assessing environmental and landscape change (including those resulting from climate change) that could be established in the Dehcho.

*Action:* RWED-HQ has established sophisticated air quality monitoring stations in Ft. Liard, Norman Wells, and Inuvik.

Dehcho RWED continues to be part of the NWTwide hare and small mammal monitoring program which is over 10 years old. We continue annual monitoring of the Nahanni bison herd and to collect annual non-resident harvest data including measuring horns of harvested Dall's sheep to assess long term growth patterns.

This item still requires discussion; the more information we can collect over the long term the better.



#### Item #11

Identify studies that are needed to support protected areas initiatives in the Dehcho.

*RWED identified the need to test and refine the caribou occupancy model of 2002 because it could be an important component for protecting areas for boreal caribou.*

*RWED conducted a wildlife survey over much of the proposed Edéhzhíe Protected Area in 2003 and provided the results to the Working Group to be used in assessment of the PA.*

*RWED surveyed areas Trout Lake felt were important in relation to protecting boreal caribou. RWED deployed satellite radio collars on boreal caribou to monitor seasonal caribou movements, determine important areas of use, and to provide additional data to refine the caribou occupancy model.*

#### Item #12

Maintain contact and dialogue with all Dehcho First Nations to ensure that all research and monitoring programs are developed and implemented together.

*Action: Dehcho RWED has attempted to maintain continued dialogue with all of the Dehcho First Nations (resident within the political boundaries) by having community meetings at least annually and by phone/written/electronic communication.*

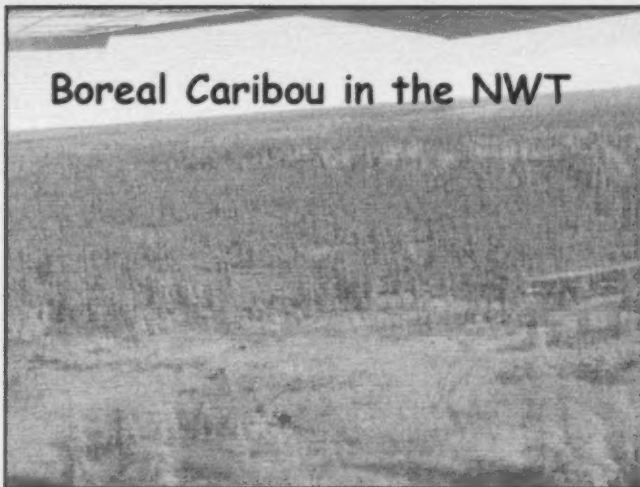
*All Dehcho RWED research/monitoring programs have been developed and implemented with local First Nations and have received signed approval from those First Nations involved as per RWED Wildlife Research Permitting protocol.*

*This meeting is to maintain dialogue and ensure that all Dehcho First Nations have this opportunity first hand.*

#### Programs/Projects Dehcho RWED Undertook/Participated in Since 2002

Problem Bear Disease/Parasites  
Diseased/Parasitized/Injured Wildlife Sampling  
Wolf Carcass/Stomach Collection  
Small Mammal Trapping  
Hare Turd Counts  
Tourist and Staff Wildlife Observation  
Edéhzhíe and area Wildlife Survey  
Boreal Caribou Survey/Satellite Collar Deployment  
Boreal Caribou Occupancy Model Refinement  
Nahanni Bison Sex/Age Classification Survey  
Nahanni Bison Population Survey  
Youth Summer Ecology Camp  
Moose Population Survey – Mackenzie River Valley  
Moose Population Survey – Liard River Valley  
Dall's Sheep Survey Nahanni/Liard Ranges  
Dall's Sheep Horn Growth  
Non-Resident Hunter Harvest Monitoring/Sampling  
Mountain Goat Survey Flat River  
Monitoring EnCana Gravity Survey  
Participated in Dene Nation Contaminant Study  
Participated in University of Alberta Mink Study  
Proposed Moose Population Monitoring  
Proposed Boreal Caribou Harvest Sampling

## Boreal Caribou in the NWT



## Woodland caribou split into:



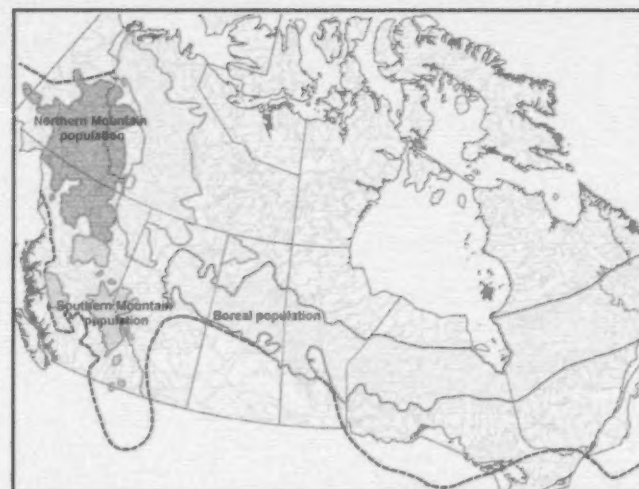
Mountain caribou

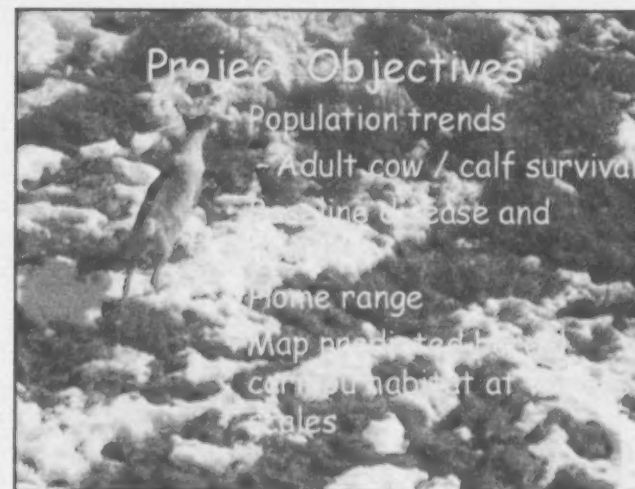
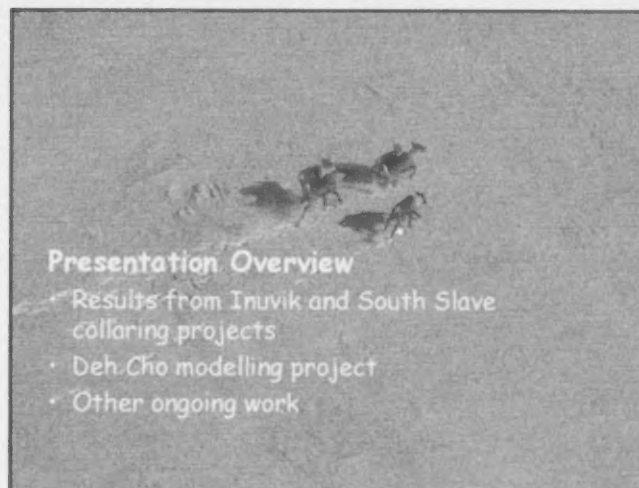
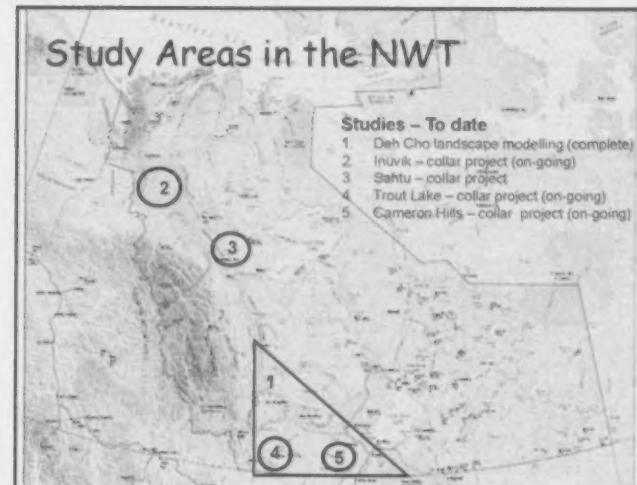


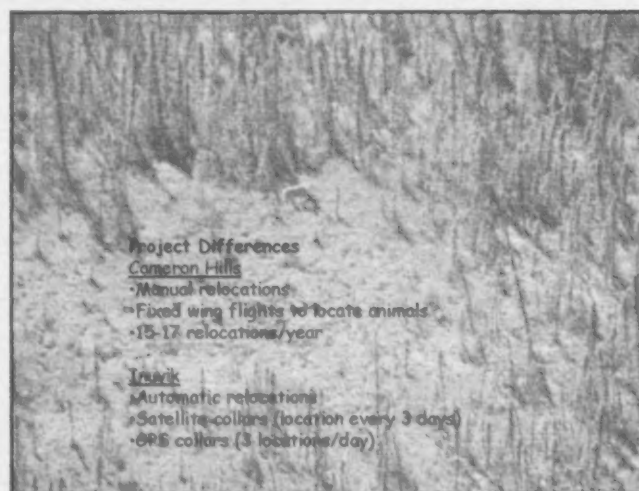
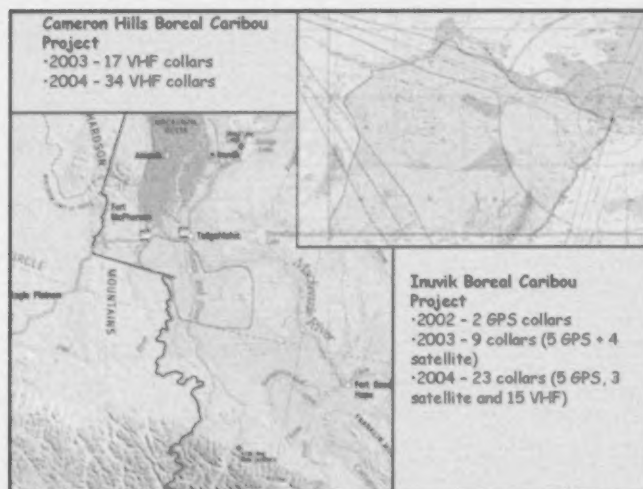
Boreal caribou

## Summary

- Work/results to date
- Proposed work
- Collaboration









### POPULATION PARAMETERS



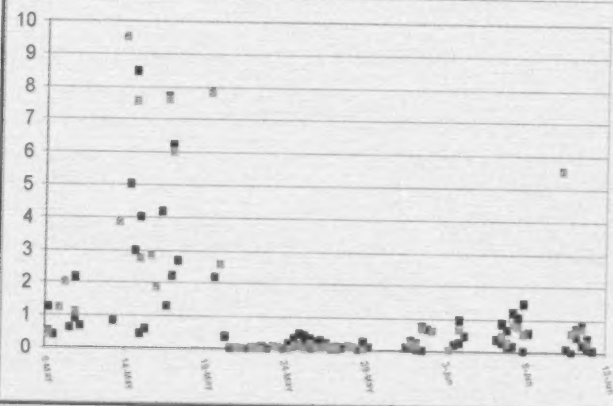
### CALF PRODUCTION

	Year	Inuvik	Cameron Hills
Pregnancy Rate	2003	88.9% (n=9) Observed calves	87.8% - 94.10.585 SE (n=16) Progesterone levels and observed calves
Pregnancy Rate	2004	74 - 84% minimum Observed calves, blood work pending	84 - 87.5% minimum Observed calves, blood work pending
Calving Dates	2003	12 - 25 May 2003 with 10% cow that calved around 9 June	13 - 22 May 2003
Calving Dates	2004	Analysis not complete but similar to 2003	12 - 25 May 2004



Inuvik - Late winter 2004  
 • Highest snowfall depths on record  
 • Mean depth = 90 cm near caribou  
 trails in early April

### Calving Dates?



### CALF SURVIVAL

Calf Survival	Year	Inuvik	Cameron Hills
Summer (calving - Sep)	2003	~62.5 %	~54 %
10 month (end of winter)	2003-04	~37.5 %	0.1717 ± 0.0293 SE (n=33 groups classified) 17 calves per 100 cows
Calving (calving - 15 June)	2004	No data	~74 %
Summer (15 June - Sep)	2004	~37.5 - 42 %	~30 - 33%

### ADULT COW SURVIVAL

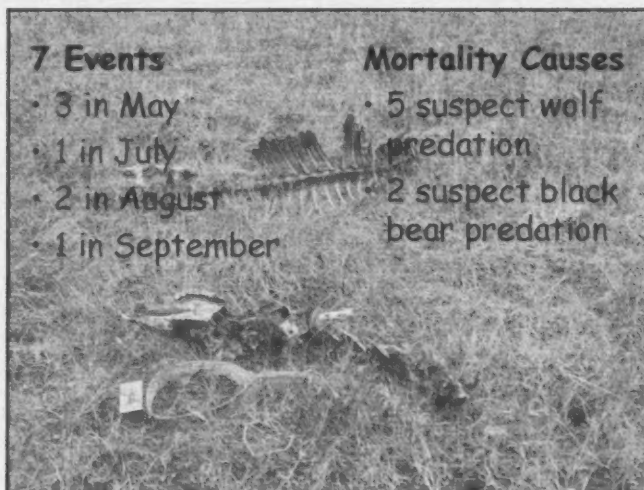
TIME PERIOD	Inuvik	Cameron Hills
1 April 2003 - 31 March 2004	100% (n=9 collared cows)	76.47% 95 % CI = 57.7-95.2% (n=17 collared cows) 4 mortality events
1 April 2004 - 31 August 2004	86.36% 95 % CI = 72.0-100% (n=22 collared cows) 3 mortality events	91.18% 95 % CI = 81.6-100% (n=34 collared cows) 3 mortality events

### 7 Events

- 3 in May
- 1 in July
- 2 in August
- 1 in September

### Mortality Causes

- 5 suspect wolf predation
- 2 suspect black bear predation



### Rate of Increase (Mar 03 - 04) Cameron Hills

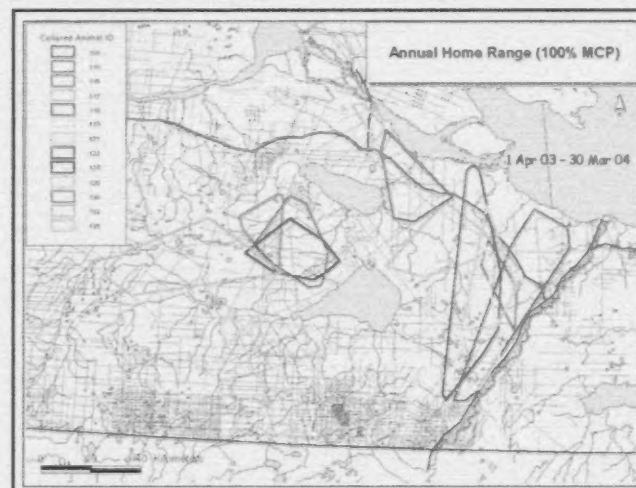
- Evaluation of population growth based on annual survival of adult cows to the survival of calves
- $r = 84.7\%$  (95% CI = 61.2-1.07%)
- Estimate highly variable due to small sample size
- Need large number of collared animals to estimate population trend

### TYPICAL GROUP SIZE

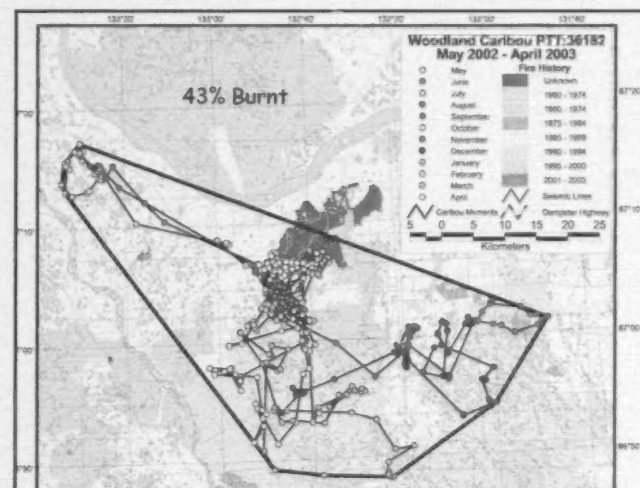
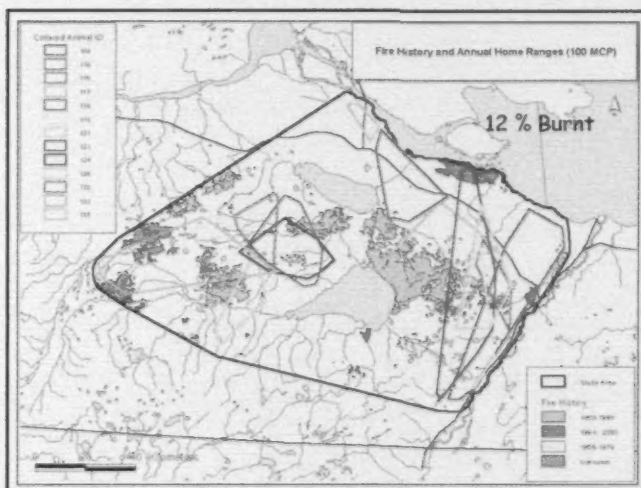
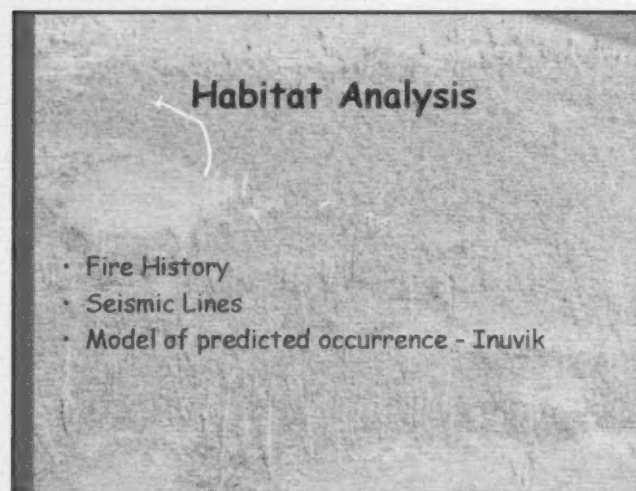
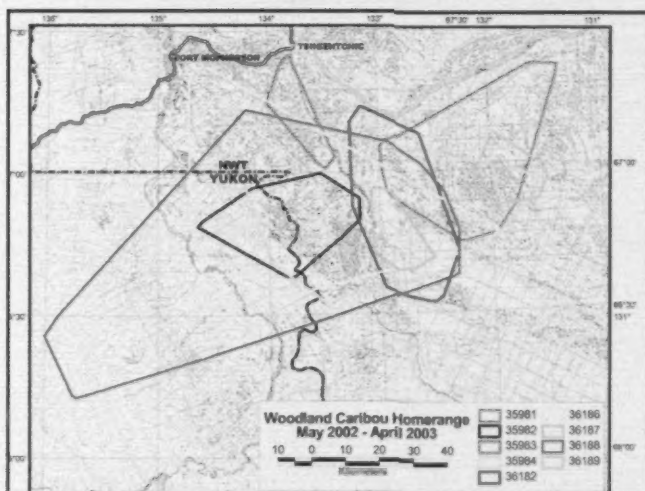
Month	TGS Cameron	TGS Inuvik	Range Cameron	Range Inuvik
March	8.2	11.9	1 - 15	2 - 26
April		11.3		1 - 25
May	2.4	3.6	1 - 4	1 - 8
June	1.7	1.8	1 - 2	1 - 2
July/August	1.7	1.5/2.2	1 - 2	1 - 3
September	5.0	9.4	1 - 11	1 - 26
October		12.7		1 - 20
November	8.4	6.8	2 - 12	2 - 10
December	7.6		2 - 11	
January	5.4		2 - 8	
February	8.8		1 - 14	

### HOME RANGE (1 Apr 03 - 31 Mar 04)

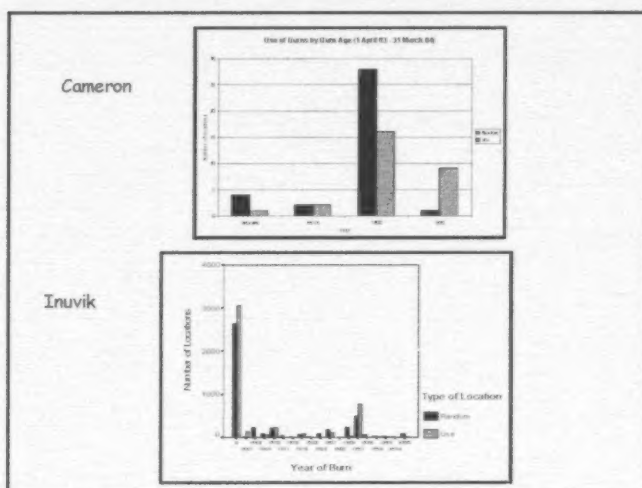
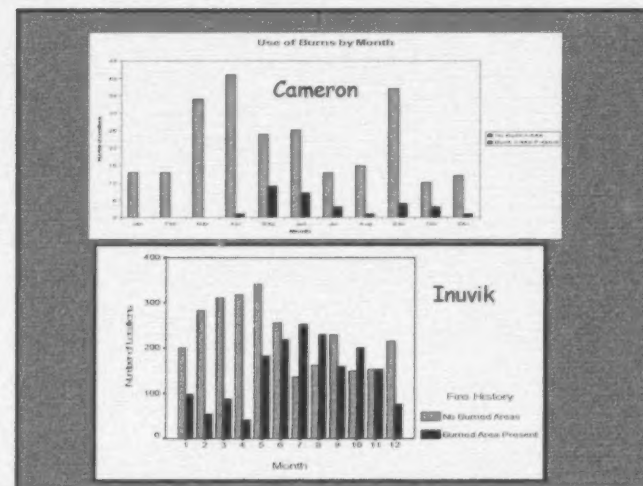
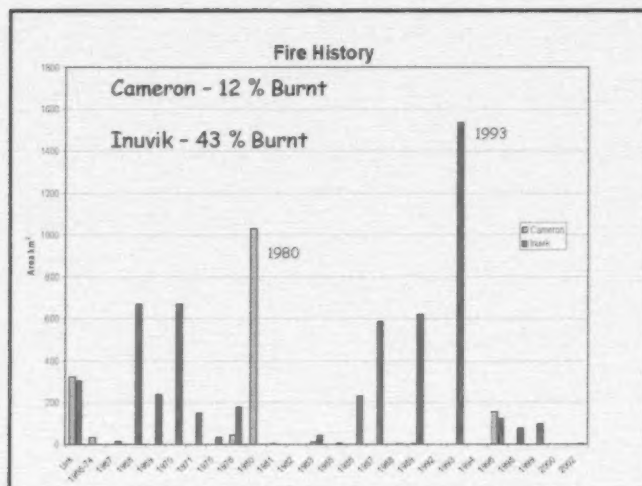
	100% MCP Cameron Hills	100% MCP Inuvik
Mean (km <sup>2</sup> )	619	3346 2571
Range (km <sup>2</sup> )	75 - 1235	481 - 10 326 481 - 6021

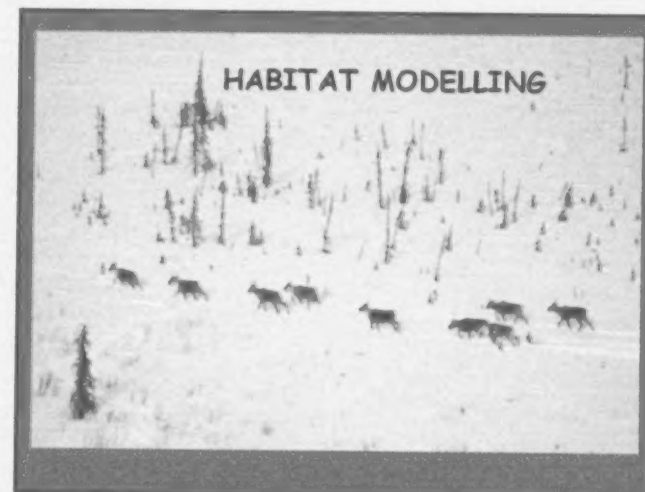
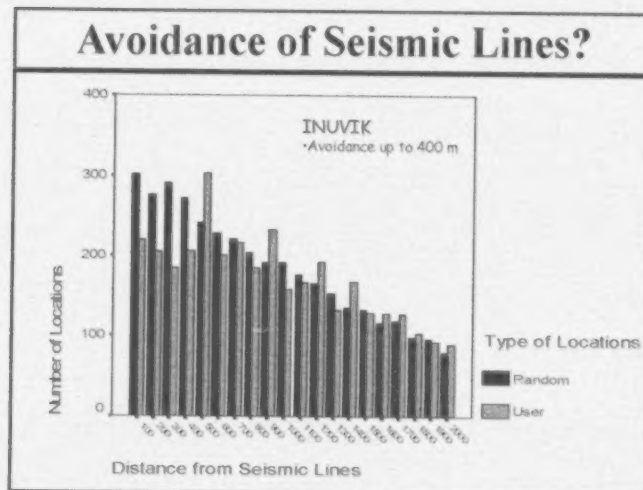
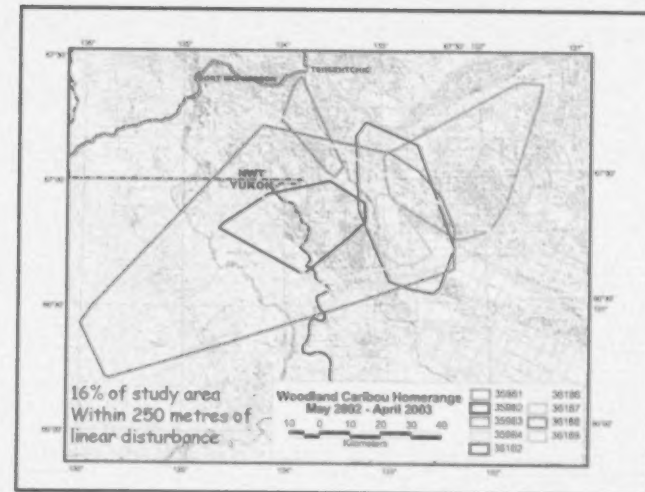
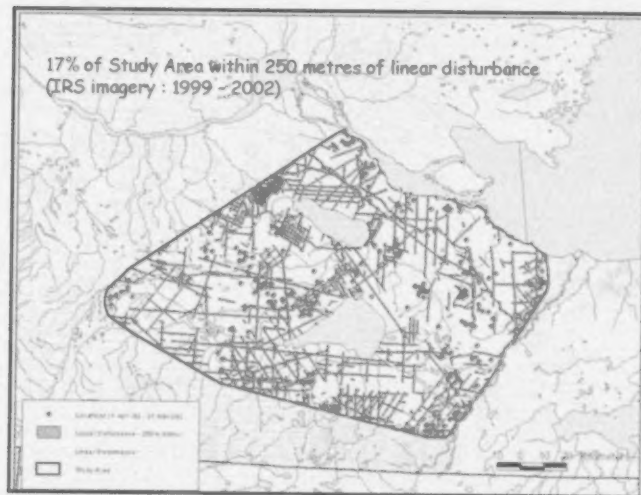












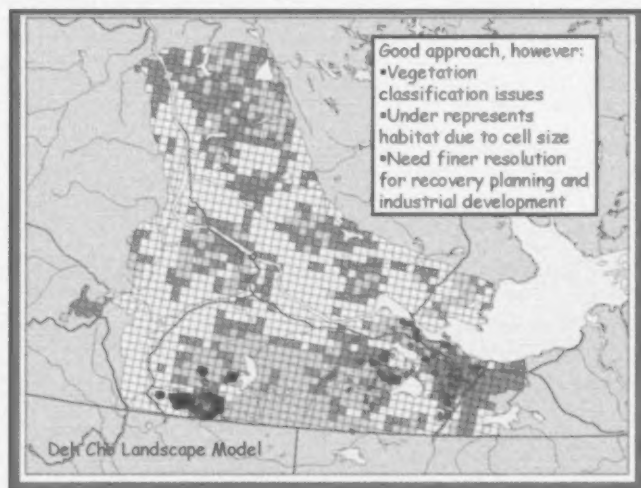
### Inuvik

- In progress
- RWED (John Nagy)
- Regional approach
- Late winter occupancy
- 1 km grid
- Vegetation and seismic lines predictors of occurrence

### Deh Cho

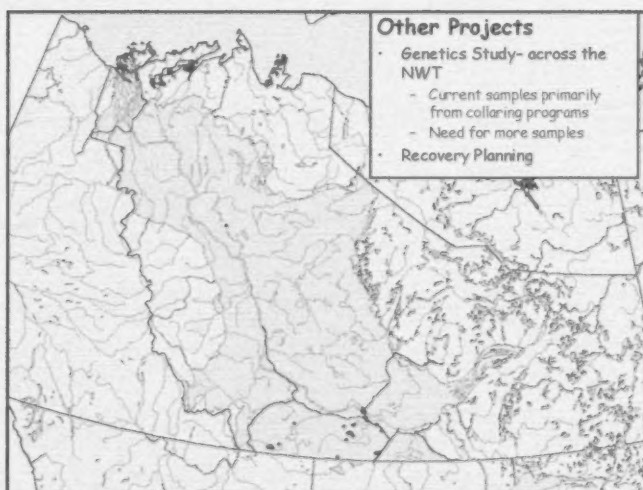
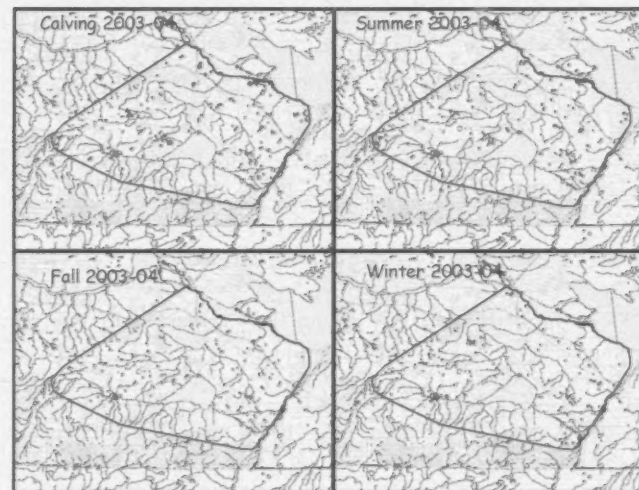
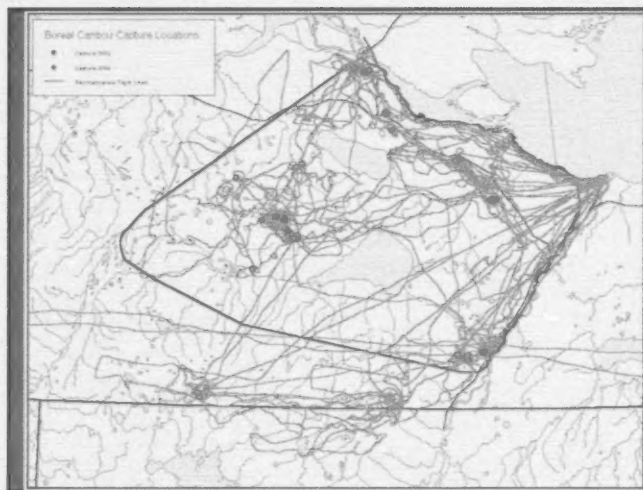
- Completed
- RWED (Anne Gunn) and DCFN
- Landscape approach
- Late winter occupancy
- 10 km grid
- Vegetation main predictor of occurrence (black spruce-lichen)

[Link to Inuvik Habitat Model:](#)



### Cameron Hills - Locations





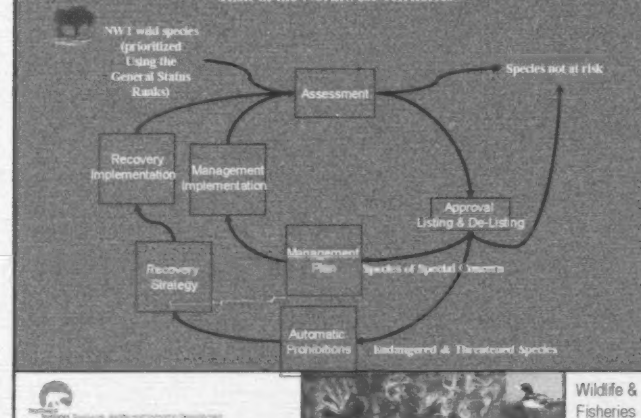
## Species at Risk Accord

- Overview
- Program updates –General Status Assessment
  - Detailed Assessments (e.g., COSEWIC)
  - Legislated Management and Recovery Planning
- Input Opportunities- Deh Cho perspectives



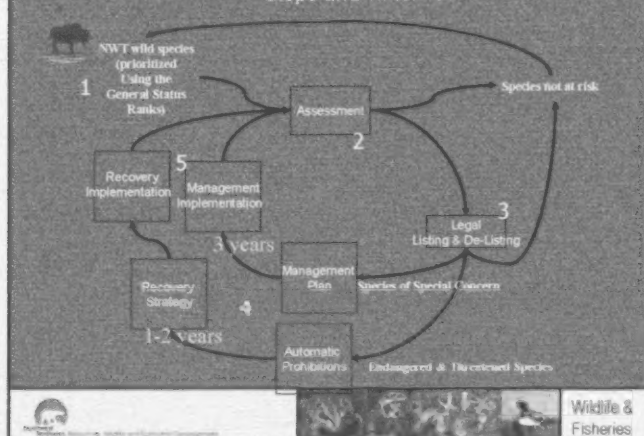
Wildlife & Fisheries

## Accord Overview - Assessment, management and recovery of Species At Risk in the Northwest Territories



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## Steps and Timelines



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## Step 1 » General Status Ranks






- Very coarse assessment of biological status
- Species ranked as *At Risk*, *May be at Risk*, *Sensitive*, *Secure*, *Undetermined*, *Exotic*, *Vagrant*
- Done every 5 years – update due in 2005
- Direct link to the priority lists for « step 2 » further detailed assessment – which can lead to « step 3 » legal designation as a « Species at Risk »



Wildlife & Fisheries

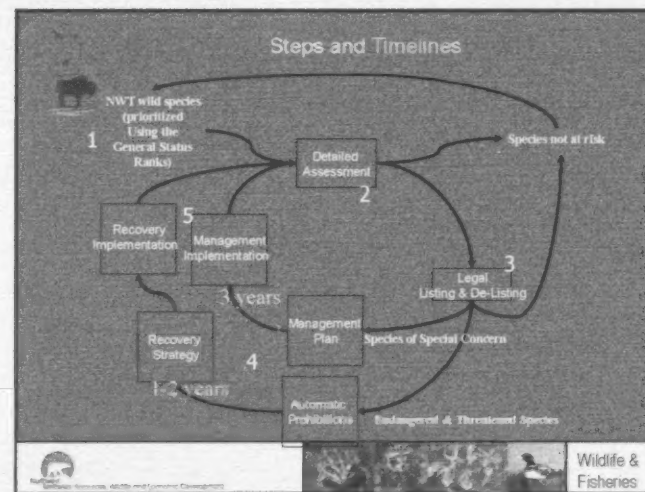
## General Status Ranks update

- Work towards 2005 – all for review and open to input
- Draft ranks were done for:
  - 2002 – butterflies (89 species in the NWT)
  - 2003 – dragonflies (37), freshwater mussels (2) and sub-set of plants (107 species)
  - 2004 – remaining sub-set of plants (1100) marine fishes (?), tiger beetles (5)
  - 2005 – All mammals, freshwater fishes, reptiles, amphibians, birds, and ferns and orchids (about 400 species)




Wildlife & Fisheries

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  - 2005 - All mammals, freshwater fishes, reptiles, amphibians, birds, and ferns and orchids (about 400 species)




## Step 2 - Detailed Assessment (COSEWIC)

- Committee on the Status of Endangered Species in Canada
- Meets every year, review species every 10 years
- Work using very detailed status reports and quantitative criteria
- COSEWIC - TEK Sub-Committee
- Input from Wildlife co-management boards
- National list – includes species on the COSEWIC list that occur in the NWT
- Similar work would be done by SARC at NWT level

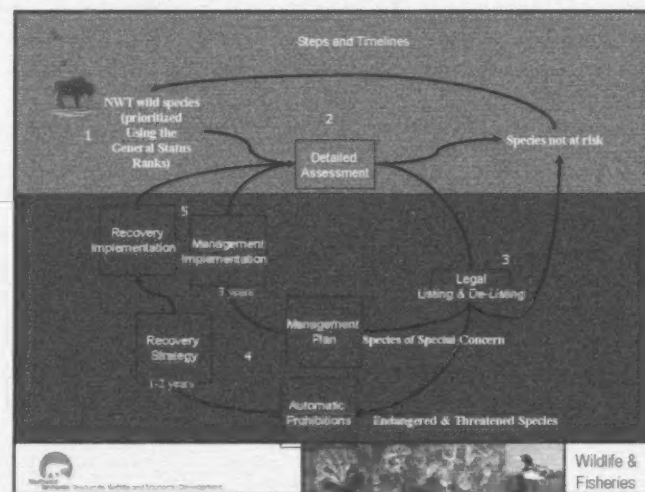


Government of Canada  
Ministère de l'Environnement et du Changement climatique



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- Similar work would be done by SARC at NWT level





### Step 3, 4, 5 – Legislated activities

- Species at Risk Act
- Proposed NWT Species at Risk Act
- Legal lists are modified after consultation
- Results in prohibitions for some species in some areas, and in scheduled tasks
  - Endangered - Recovery strategy within 1 year
  - Threatened - Recovery strategy within 2 years
  - Special Concern - Management Plan within 3 years
- NWT Species on COSEWIC list and on SARA legal list given as hand-out



Wildlife & Fisheries

### SAR Species in the Deh Cho

COSEWIC list	Legal list
-Wood Bison (THR)	June 2004
-Boreal Woodland Caribou (THR)	June 2004
-Grizzly (SPC)	
-Wolverine (SPC)	
-Northern Mountain Woodland Caribou (SPC)	
-Peregrine Falcon (THR)	June 2004
-Short-eared Owl (SPC)	
-Yellow Rail (SPC)	June 2004
-Shortjaw Cisco (THR)	
-Northern Leopard Frog (SPC)	
-Western Toad (SPC)	



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### SAR Species in the Deh Cho

COSEWIC list	Legal list
-Wood Bison (THR)	June 2004
-Boreal Woodland Caribou (THR)	June 2004
-Grizzly (SPC)	? Jan 2005
-Wolverine (SPC)	? Jan 2005
-Northern Mountain Woodland Caribou (SPC)	? Jan 2005
-Peregrine Falcon (THR)	June 2004
-Short-eared Owl (SPC)	
-Yellow Rail (SPC)	June 2004
-Shortjaw Cisco (THR)	
-Northern Leopard Frog (SPC)	? Jan 2005
-Western Toad (SPC)	? Jan 2005



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### Input??

- Help draft and review General Status Ranks
- Involvement in TEK reviews (COSEWIC)
- Input and review of detailed assessment reports
- Input and review in recovery strategies and management plans
- On the land involvement: planning to implementation of activities related to SAR in the Deh Cho



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## SAR Species in the Deh Cho

COSEWIC list	Planning
-Wood Bison (THR)	R. Strategy 2007
-Boreal Woodland Caribou (THR)	R. Strategy 2007
-Grizzly (SPC)	
-Wolverine (SPC)	
-N. Mountain Woodland Caribou (SPC)	R. Strategy 2007
-Peregrine Falcon (THR)	
-Short-eared Owl (SPC)	Manag. Plan 2008
-Yellow Rail (SPC)	
-Shortjaw Cisco (THR)	
-Northern Leopard Frog (SPC)	
-Western Toad (SPC)	



Environment Canada / Environnement Canada



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## Deh Cho in North America

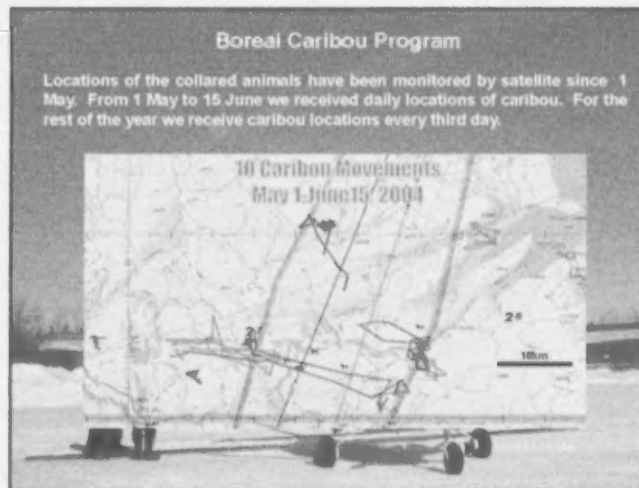
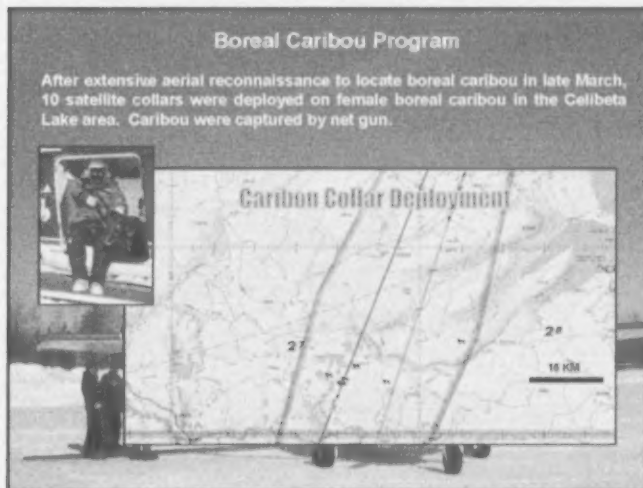
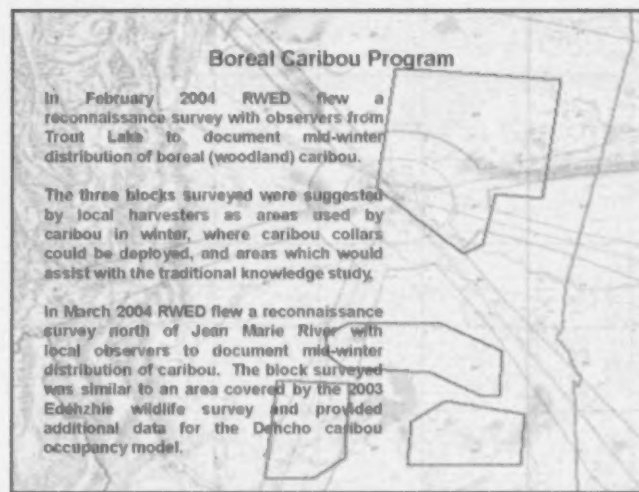
- Major pristine portion of the greater Boreal Forest – cradle of many boreal bird species
- Expertise in TEK
- Expertise in Aboriginal involvement
- Species at northern edge, southern edge, eastern edge, and western edge of their range - Biodiversity Hotspot understudied
- Diversity in Landscapes



Environment Canada / Environnement Canada



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### Boreal Caribou Program

Locations of the collared animals every third day from 18 June to 30 July. Caribou are quite dispersed, some move greater distances than others.



### Boreal Caribou Program

Locations of the collared animals every third day from 2 to 29 August. Again some moving greater distances than others.



### Boreal Caribou Program

Locations of the collared animals every third day from 1 September to 4 October. Much less dispersed than in summer.



### Boreal Caribou Program

Because the collars have a conventional VHF transmitter they can also be located using conventional telemetry antennas.

We made 3 relocation flights to try and observe the caribou to see if they had calves. Flights occurred in late-May, early-June, and mid-September.

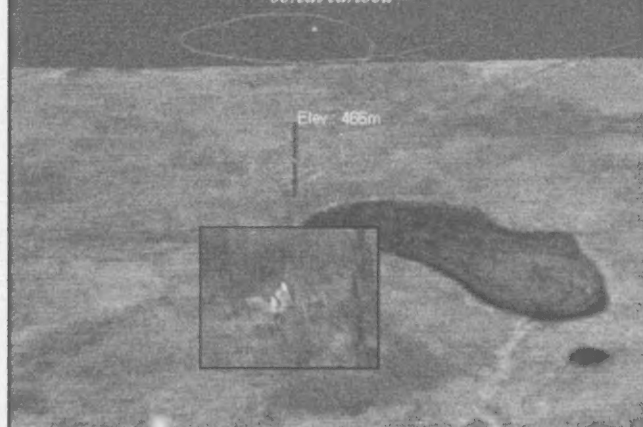
It is difficult to get visual observations of caribou. We know that 4 of the 8 live caribou had calves, 3 likely did not calve, and 1 lost her calf before fall.

Two caribou have died since deployment, most likely killed by predators; we recovered both collars and confirmed that one caribou was killed by wolves.

Redeployment of the two collars could take place next spring in areas suggested by Trout Lake.

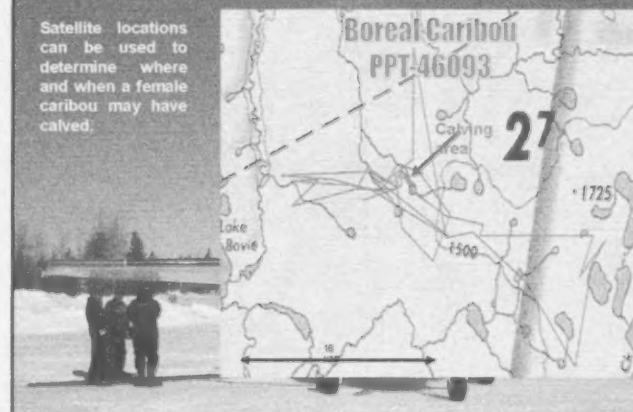


*The flight path of a Cessna 172 aircraft as it relocates a collared female boreal caribou*



#### Boreal Caribou Program

Satellite locations can be used to determine where and when a female caribou may have calved.



#### Boreal Caribou Programs

In 2003, the Dene Nation received funding for a contaminant study

Trout Lake provided RWED with a set of caribou samples for the contaminant study

February 2003, RWED and Trout Lake organized a hunt for additional samples but was unsuccessful

Wolves were provided to RWED from a local trapper, teeth have been sent out for aging and the stomach contents will be analyzed later

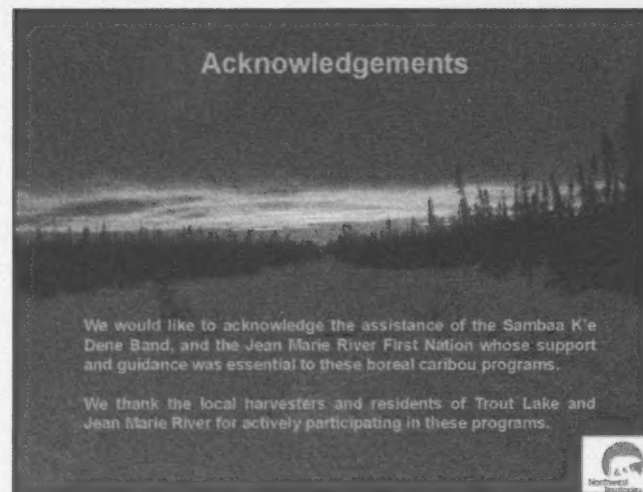
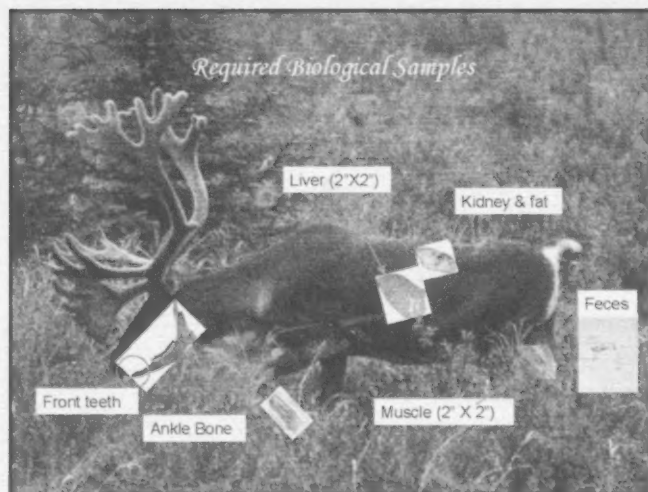
#### Monitoring Caribou Health and Harvest?

This was a topic of discussion at Wildlife Workshop, 2002, and has subsequently been discussed at meetings with Sambaa K'a.

Would require submitting a suite of samples from harvested caribou to RWED

Would need to collect from an agreed upon number of animals each year.

Would need to determine an agreed upon reimbursement with harvesters providing the samples





## Dehcho Moose Programs

Mackenzie Valley moose survey

Liard Valley moose survey

Biological sampling

Proposed population monitoring program

## Moose Survey along the Mackenzie Valley

November 10-16, 2003

During First Nation consultations in August, RWED described the pros, cons, and costs of various aerial survey techniques and a decision was made and approved to use the new geospatial technique to survey moose. This technique has been used extensively in Alaska and the Yukon Territory.

### Delineate Survey Area

> In August 2003, RWED requested PRFN, LKFN, JMNPN and Ft. Simpson Métis to indicate traditional areas they wanted surveyed for moose.

> All the areas identified were pooled together, digitized, and a map produced.

> A grid of ~18km<sup>2</sup> (2 minutes latitude by 5 minutes longitude) was overlaid to include the entire study area.

> The map was circulated amongst the First Nations to finalize the survey area.

> Map produced of the survey area grid.

### Stratify Sample Units

> Consulted with local harvesters from Wrigley, Ft. Simpson, and Jean Marie River to partition sample units into high or low expectation of finding moose.

> In areas unfamiliar to local harvesters we used previous survey and habitat data to assist in stratification.

> Tried to keep low strata areas as clean as possible.

> The Horn Plateau and Ebbutt Hills were removed from the survey area because they were not considered suitable moose habitat.

> Produced a map of the stratification.

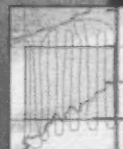
### Select Sample Units

- > Planned to survey 100 of the 1459 sample units (6.9% coverage).
- > Because almost 50:50 split of low/high strata advised to select 60 high strata and 40 low strata sample units to survey.
- > Randomly selected 80% of the units (50 high and 30 low).
- > Through consultation with ADF&G personnel chose the remaining units (13 high, 7 low) ensuring that sampled units covered entire survey area.
- > Produced map of the selected units.



### Flying Sample Units

- > 2 aircraft were used for the survey, one based out of Wrigley (November 10-15) and the other was based out of Fort Simpson (November 10-16).
- > Flight plans were determined to most efficiently cover all of the selected sampling units.
- > Used pre-programmed GPS units to locate sample units and track coverage.
- > Each selected sampling unit was flown with a Cessna 195 at 100% coverage with the assistance of 1 or 2 local observers.
- > Animals were skinned, sexed (cow, bull, doe) and recorded within each sample unit. No animals were recorded any animals observed between sample units.
- > Depending on vegetation and topography some sample units had to be flown at higher coverage.



High strata sample unit



Low strata sample unit

### Results

- > We surveyed 100 sample units of 10km<sup>2</sup> (6.9% coverage).
- > Late freeze-up resulted in some high density sample units being unfrozen and few moose being found there.
- > We saw 140 moose, 51 caribou and 1 wolverine during the survey; 74 moose were observed within the sample units.
- > We estimated a density of 4.4 moose/100km<sup>2</sup> and a calf:cow ratio of 32.1:100 females in the ca. 23,300km<sup>2</sup> Mackenzie Valley Survey area.

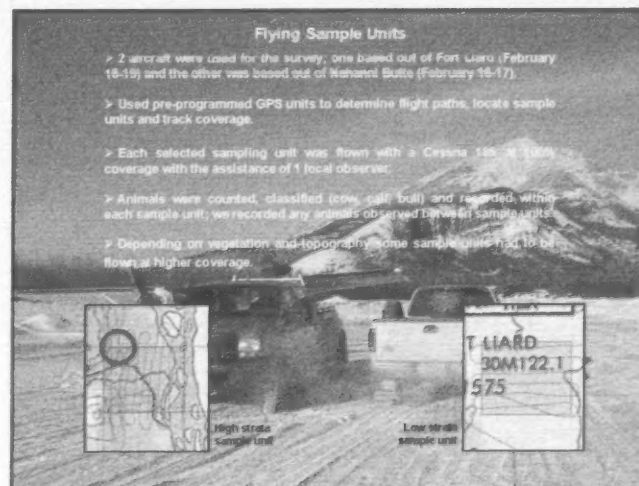
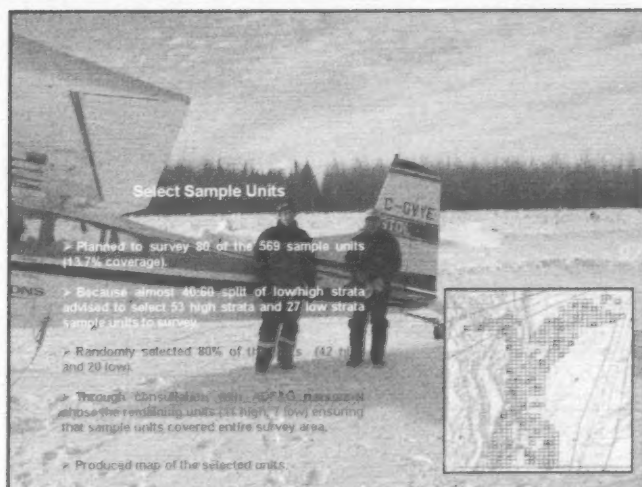
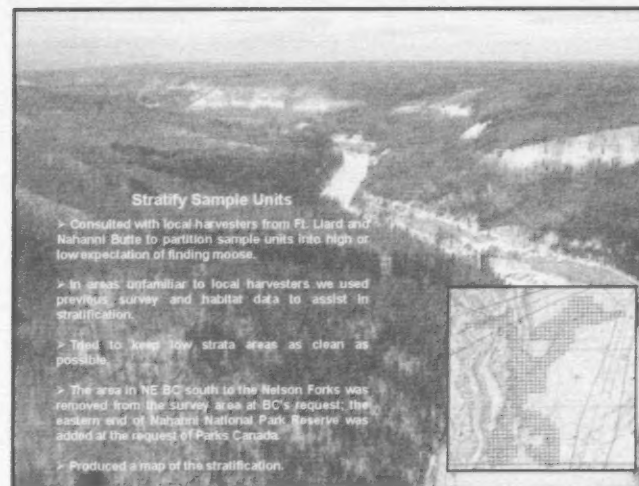
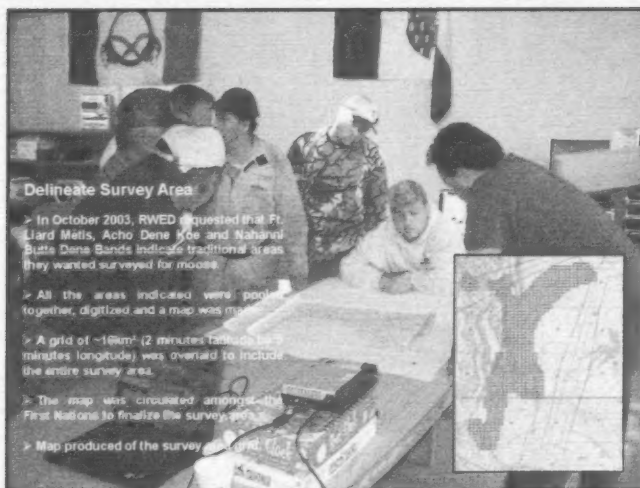


### Moose Survey along the Liard Valley

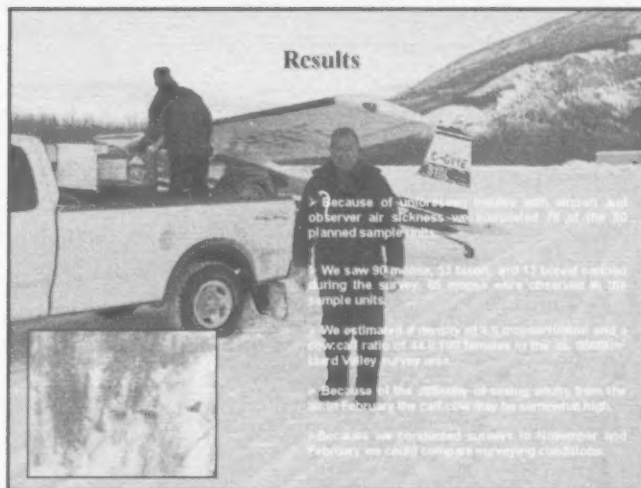
February 16-19, 2004

During First Nation consultations in August, RWED described the pros, cons, and costs of various aerial survey techniques and a decision was made and approved to use the new GPS/GPS technique to survey moose. This technique has been used extensively in Alaska and the Yukon Territory.

co-sponsored by Parks Canada







## Results

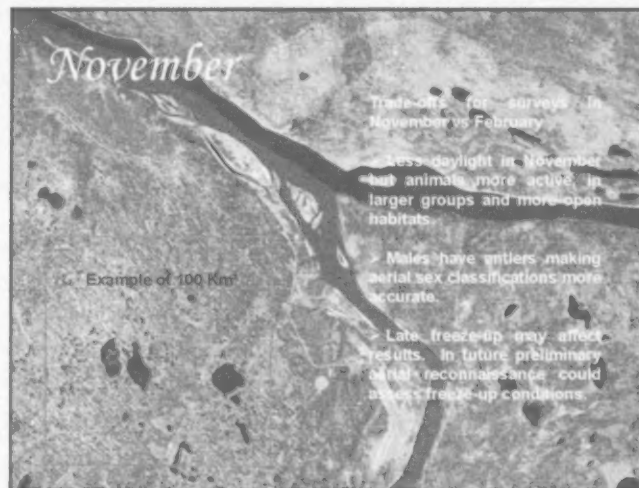
> Because of adverse weather with frozen and observer air sickness we completed 79 of the 100 planned sample units.

> We saw 90 moose, 53 bulls, and 12 mixed-sex moose during the survey. 16 moose were observed in the sample units.

> We estimated a density of 3.5 moose/km<sup>2</sup> and a cow:bull ratio of 44.6:100 females to the 100 males in the Great Slave Lake Valley survey area.

> Because of the difficulty of seeing adults from the air, the cow:bull ratio may be somewhat high.

> Because we postponed surveys to November and February we could compare surveying conditions.



## November

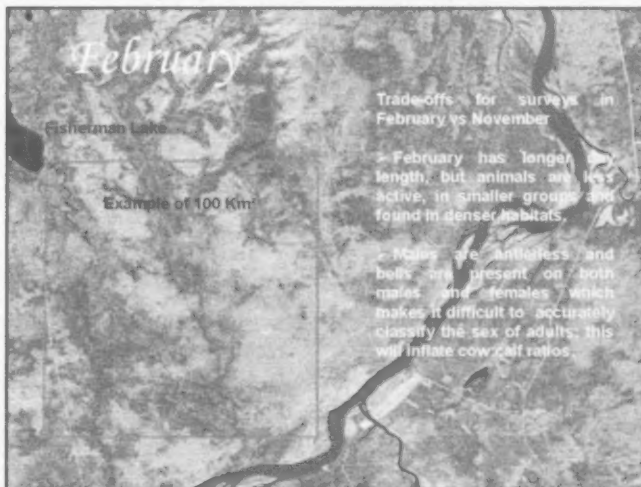
Trade-offs for surveys in November vs February

> Less daylight in November but animals more active in larger groups and more open habitats.

> Males have antlers making aerial sex classifications more accurate.

> Late freeze-up may affect results. In future preliminary aerial reconnaissance could assess freeze-up conditions.

Example of 100 Km<sup>2</sup>



## February

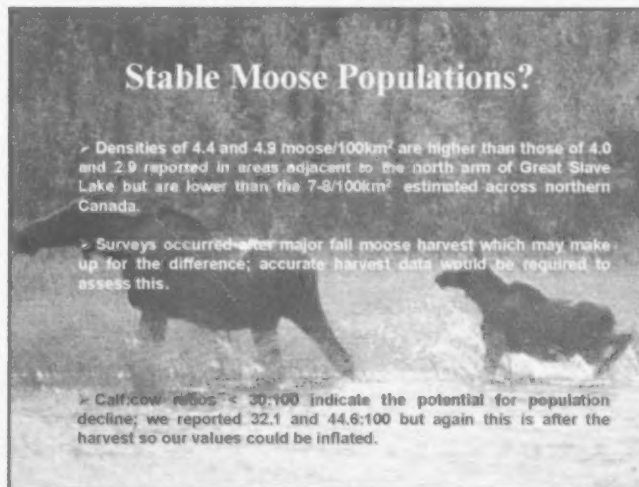
Fisherman Lake

Example of 100 Km<sup>2</sup>

Trade-offs for surveys in February vs November

> February has longer length, but animals are less active, in smaller groups and found in denser habitats.

> Males are antlerless and bulls are present on both males and females which makes it difficult to accurately classify the sex of adults; this will inflate cow:bull ratios.



## Stable Moose Populations?

> Densities of 4.4 and 4.9 moose/100km<sup>2</sup> are higher than those of 4.0 and 2.9 reported in areas adjacent to the north arm of Great Slave Lake but are lower than the 7-9/100km<sup>2</sup> estimated across northern Canada.

> Surveys occurred after major fall moose harvest which may make up for the difference; accurate harvest data would be required to assess this.

> Calf:cow ratios < 30:100 indicate the potential for population decline; we reported 32.1 and 44.6:100 but again this is after the harvest so our values could be inflated.

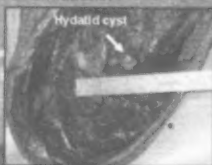
## Biological Samples

RWED accepts a variety of biological samples from harvested moose; most are submitted to diagnose abnormalities.

➤ Samples are forwarded to the Western College of Veterinary Medicine if diagnoses cannot be made locally, or if confirmation is requested; teeth are forwarded for aging.

➤ Moose warts (papillomas) and hydatid tapeworm cysts have been diagnosed in the region; these are common moose afflictions.

➤ Observations of "ghost" moose, a condition caused by ticks, have been rare in this region.



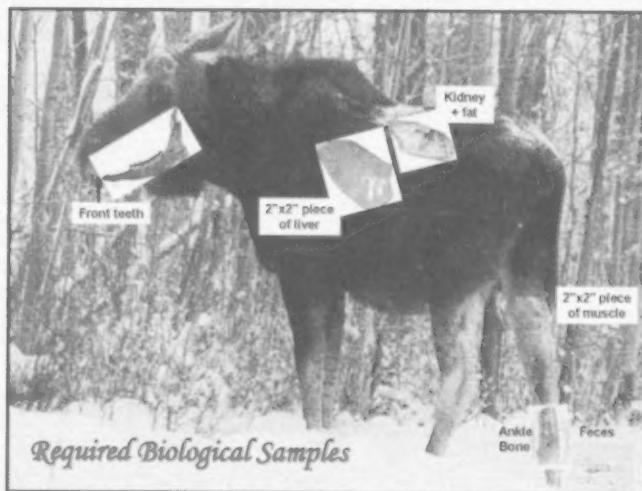
## Monitoring Moose Population & Health

➤ This was a topic of discussion at Wildlife Workshop, 2002, and has subsequently been discussed at meetings in Wrigley, Fort Simpson, Jean Marie River, Nahanni Butte, and Fort Liard.

➤ RWED proposes to begin annual monitoring of moose density, distribution and cow: calf ratios during winter in the Mackenzie and Liard Valleys, by conducting annual small scale aerial surveys from each community; the same blocks used in the 2003-04 geospatial surveys will be used for the monitoring program.

➤ RWED also proposes to collect biological samples from 5 harvested moose from each First Nation in these communities; local harvesters will be reimbursed for providing these samples.

➤ The Wildlife Research Permit Application for this proposal has been approved by PKFN, JMRFN, LKFN and the Fort Simpson Métis.



## Acknowledgements

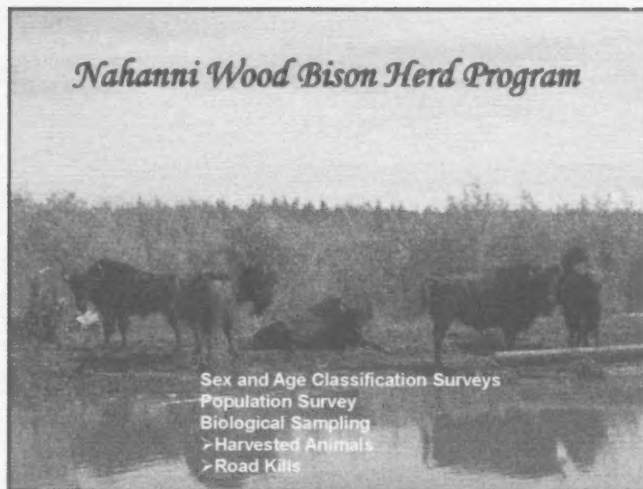
➤ We would like to acknowledge the assistance of the Pehdzeh Ki, Liidlii Kue, and Jean Marie River First Nations, Fort Simpson Métis, Nahanni Butte Dene Band, Acho Dene Koe Band and the Fort Liard Métis Local 67 whose support and guidance was essential to the design and successful completion of the moose surveys.

➤ We thank the local harvesters and residents of Wrigley, Fort Simpson, Jean Marie River, Nahanni Butte and Fort Liard for actively participating in these programs.

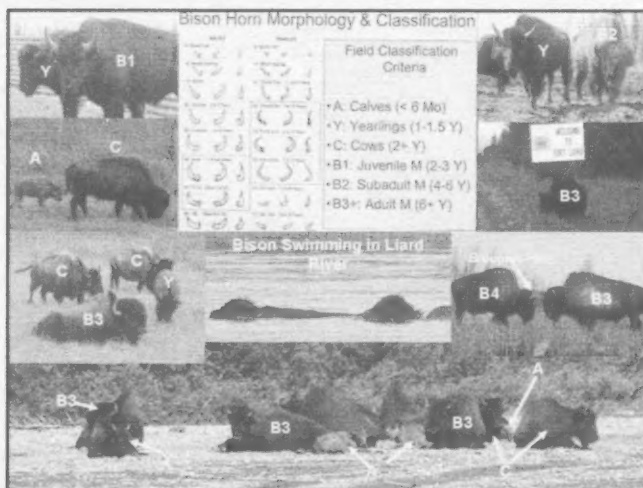
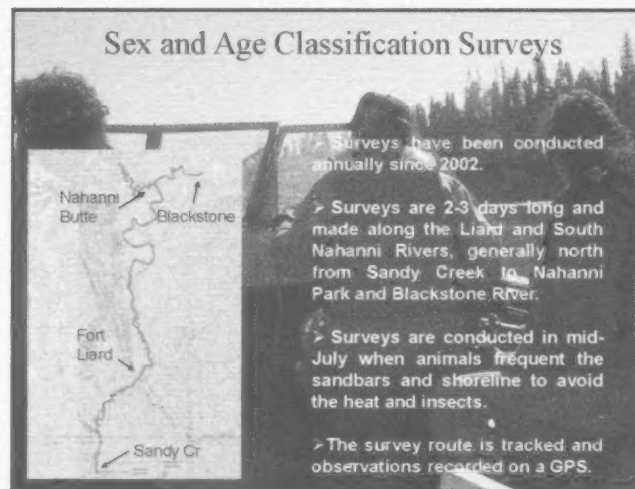
➤ We also acknowledge Parks Canada for providing additional funding and manpower for the Liard Valley moose survey.



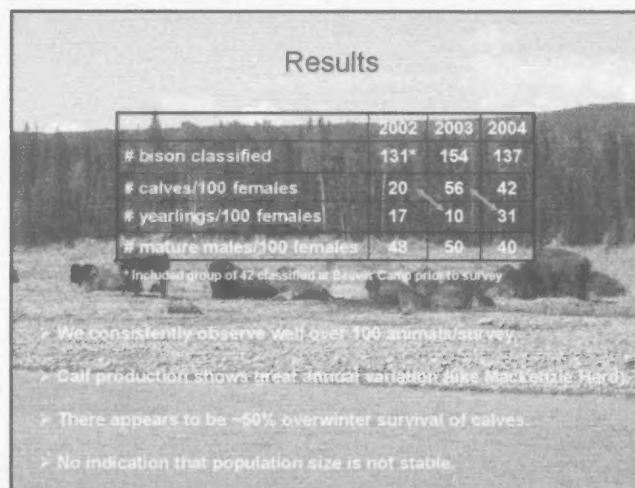
## Nahanni Wood Bison Herd Program



## Sex and Age Classification Surveys



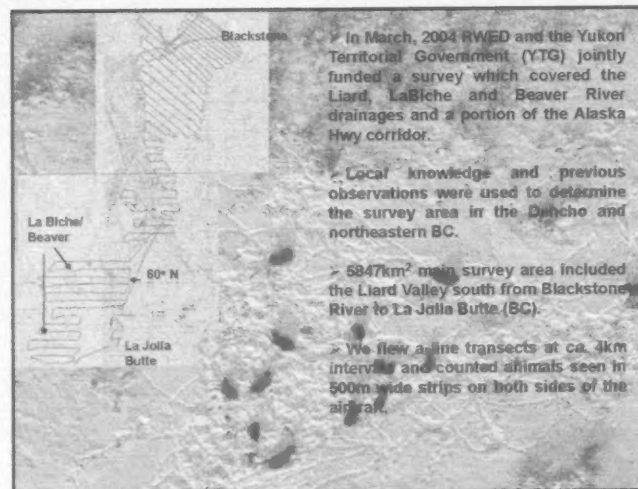
## Results





## Wood Bison Population Survey March 22-23, 2004

An up-to-date estimate of the size of the Nahanni Wood Bison population was a key issue at the 2002 Regional Wildlife Workshop.



## Results

	Survey Area (km <sup>2</sup> )	Count Area (km <sup>2</sup> )	Coverage (%)	Bison Seen	Bison Estimated
NT	3755	1113	29.6	102	344
YT	619	114	22.0	0	0
BC	151	115	22.7	0	0
AKHwy	634	222	35.0	6	30
TOTAL	6481	1854	28.6	108	362

➤ Most bison and bison sign was found in the Northwest Territories generating an estimate of ca. 360 animals more than the ca. 200 previously believed to reside in the Liard Valley and area.

➤ Any wildlife sign was rare in NE BC where there are many cut blocks.

➤ Bison use along the Alaska Hwy was not restricted to the road corridor, recent burnt areas adjacent to the road were heavily used.

### Sampling Harvested Bison

RWED tries to accompany bison hunts by Fort Liard and Nahanni Butte in order to specifically collect blood samples; it is very difficult to get proper blood samples from animals found dead.

Blood samples are analyzed for the presence of diseases and to ensure that neither tuberculosis nor brucellosis are present in bison.

Other samples, like hoofs, are also collected so we can find out what bison are eating at different times of the year. Preliminary results show that bison eat scolding rushes, which will prematurely wear teeth.

### Sampling Road-Killed Bison

There had been few collisions between vehicles and bison on the Liard Hwy this fall.

RWED and DOT have a plan in place so that as much information can be collected from these unfortunate incidents as possible.

The key issue is timely reporting so meat can be salvaged and all useful information can be collected.



### Biological Sample Collection

RWED tries to collect a variety of biological samples from dead animals depending upon carcass condition.

Teeth for aging; longbones for measuring marrow fat; lymph nodes for disease; stomach contents and poop for diet, parasite, disease; kidney and liver for contaminants.

### Acknowledgements

We would like to acknowledge the assistance of the Nahanni Butte Dene Band, the Ache Dene Koe Band and the Fort Liard Metis Local 67 whose support and guidance was essential to these bison programs.

We thank the local harvesters and residents of Nahanni Butte and Fort Liard for actively participating in these programs.

We also acknowledge the Yukon Territorial Government for providing additional funding and manpower for the bison population survey.



**WILDLIFE RESEARCH**

in  
**Nah?ą Dehé**  
Nahanni National Park Reserve

Dehcho Wildlife Workshop  
October 19, 2004

Douglas Tate  
Conservation Biologist  
Nahanni National Park Reserve

Parks Canada Parks Canada Canada

**OVERVIEW**

- I. **Why do Wildlife Research?**
  - Parks Canada Mandate
  - Reasons for Research & Monitoring
- II. **What Should We Study?**
  - Developing Research Priorities for Nahanni
- III. **What's New?**
  - Highlights of Recent Wildlife Studies
- IV. **Where do we go now?**
  - Conclusions and Future Directions

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**I. Why do Wildlife Research?**

- Parks Canada mandate - to protect representative samples of all of Canada's Natural Regions
- National System Plan - Nahanni National Park Reserve represents the Mackenzie Mountains region
- *Canada National Parks Act* (2000) clearly states that protection of ecological integrity is the first priority of National Parks

*[Ecological Integrity can be defined as  
"the health of the land"]*

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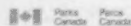
**Completing Canada's National Park System**

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## II. What should we study?

- January 2000 Workshop (DFN/PC) to determine the state of park ecology, research needs.
  - federal and territorial government representatives
  - scientific researchers
  - local community leaders
  - elders and active harvesters
- June 2000 - formation of Nahʔa Dehé Consensus Team as part of Deh Cho I.M.A.;
  - 3 by Parks Canada
  - 2 members appointed by DCFN
  - 2 members appointed by Nahanni Butte
- Ecological Integrity Statement (2001)
- Interim Park Management Arrangement (2003)
- Park Management Plan (2003)



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## II. What should we study? (continued)

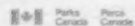
- Nahʔa Dehé Consensus Team used workshop results to write the Ecological Integrity Statement, and the Park Management Plan, which:
  - affirm the importance of research, monitoring and traditional knowledge
  - acknowledge that Dene are inseparable from the land, and traditional use will continue as a part of the park ecology
  - confirm the South Nahanni River watershed as the primary area of interest and influence in terms of park ecology
  - provide objectives and targets for park management, including wildlife research



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## III. What's New? (Research Highlights)

- Woodland Caribou
- 1995- Study started by NNPR in consultation with LKFN; cooperation with RWED and Yukon Renewable Resources
- South Nahanni herd winters in park river valleys, summers in alpine NW of park
- Traditional knowledge of caribou migration on Flat and Caribou River valleys
- Some caribou travel west to Coal River area, or south to LaBiche Range; work is ongoing.

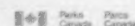


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## III. What's New? (Research Highlights)



- Moose
- No moose surveys had occurred since 1980s.
- NNPR supported the RWED moose surveys (Dehcho Region) by contributing extra funding and staff assistance (2003/04)
- Planned moose surveys in Liard and Mackenzie valleys were extended into South Nahanni River valley from Nahanni Butte up to Deadmen Valley



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### III. What's New? (Research Highlights)

- Dall's Sheep
- Composition counts (ground-based) started on Tlogotsho Plateau in 2001, repeated in 2002 & 2003



- Similar to Sahtu RWED approach, smaller scale
- Contributes to parasite study with University of Saskatchewan & RWED
- 53 sheep observed in 2003; ratio of 41 lambs per 100 ewes suggests good birthing rates

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### III. What's New? (Research Highlights)

- Bull Trout
- Listed as 'threatened' in US, 'sensitive' in AB, BC & YT, and 'may be at risk' in NWT (RWED, 2000)
- Southern populations of Bull Trout have declined due to industrial disturbance
- Initial work with Neil Mochnacz (UofM & DFO) in 2001 confirmed that Bull Trout, not Dolly Varden, occur in the South Nahanni River watershed
- Additional work, done in 2004, will look at distribution, and genetic differences between river and stream-dwelling trout



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### III. What's New? (Research Highlights)

- Lake Trout
- Lake Trout also occur in lakes and rivers in South Nahanni River watershed
- Lakes which have waterfalls along their outlet streams may have unique, isolated trout populations
- Parts of the Nahanni were not glaciated in the last ice age, and trout from here may have colonized much of Canada.
- Scientists have contacted us about doing research on this topic in the park.



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### III. What's New? (Research Highlights)

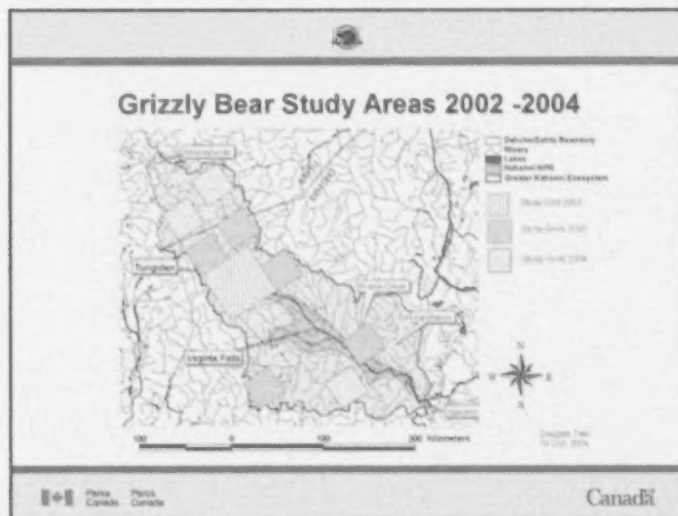
- Grizzly Bear
- 2002 - Project initiated in cooperation with Dr. John Weaver, Wildlife Conservation Society.
- Determine relative abundance and distribution of grizzly bears in and adjacent to park



- Identify important areas, movement patterns, potential areas of conflict
- Ragged Range grid block surveyed in 2002, five blocks in watershed surveyed in 2003, and three blocks surveyed in 2004.

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### III. What's New? (Research Highlights)

- **Grizzly Bear**
- No capturing or handling of bears; barbed wire corral with scent lure - bears investigate but find no food
- Hair samples caught on wire; additional hairs taken from rub trees
- DNA analysis identified 16 individual grizzly bears in the Ragged Range grid block; 52 grizzly bears from 5 grid blocks in 2003.
- At Rabbitkettle, at least 7 grizzlies used rub trees along the tufa trail in 2002, and at least 8 used these trees in 2003.

Map of Northwest Territories, Canada

### III. What's New? (Research Highlights)

- **Nahanni Aster & Hotsprings**

- The Nahanni Aster is a small, rare flower, found only at thermal springs in the Nahanni region
- Blooms late in the year, August & September
- Survey done in 2003 at 9 hot spring sites
- Field work also included collecting invertebrates (insects, snails, etc) in spring waters.
- Two researchers, Dr. John Semple (asters) and Dr. Dwayne Lepitzki (hotspring invertebrates) were involved.

Map of Northwest Territories, Canada

### III. What's New? (Research Highlights)

- **Nahanni Aster & Hotsprings (cont.)**

- Nahanni Asters appear to be doing fairly well at 3 known sites (Rabbitkettle, OldPots, Wildmint) new 4<sup>th</sup> site discovered (Cascade)
- Samples collected for further analyses, to clarify their relationship with related plants
- 74 species identified at the hot spring sites. The most diverse were OldPots and Wildmint Springs; hotter springs (Moore's, Lened, Meilleur) had lower diversity
- Many species of insects, and some interesting snails found One damselfly may be a new species for the NWT

Map of Northwest Territories, Canada



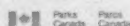
### III. What's New? (Research Highlights)

#### • Other Wildlife

- Record sightings of other species including wolves, lynx, mountain goat, beaver, frog.
- Breeding bird and spring migration monitoring, recording observations on park shifts and patrols



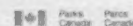
- Periodic surveys for Trumpeter Swans, and raptors (eagles, hawks & falcons)
- Occasional monitoring of rare species such as Upland Sandpiper, Black Tern, Western Toad



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### IV. Where do we go now?

- Ecological Integrity (health of the land) is good in Nah7a Dehé - Nahanni National Park Reserve
- There are some areas of concern, there is a need to continue research
- Cooperation with DFN, RWED, communities and other organizations has worked well; partnerships will continue to be very important in future
- Planning to develop a Science Strategy for the park which spells out priorities in more detail, and we look forward to involving our partners in this effort.
- Parks Canada is a major partner in administering the new Species at Risk Act - may be more opportunities for cooperative research

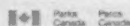


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### IV. Where do we go now? (continued)

- Nah7a Dehé Consensus Team continues to act as the cooperative management team for NNPR; wildlife research proposals are reviewed by the NDCT
- NDCT currently consists of:
 

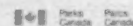
Jonas Antoine
Douglas Tale
Sophie Borcoman
Wesley Hardisty
George Tsetso
Morris Vital
George Betsaka
- Nah7a Dehé K'édíí - Taking Care of Nah7a Dehé workshop in Nahanni Butte in Feb 2004; confirmed the desire of the community to expand the park, to develop a code of conduct for harvesters, and to further study traditional knowledge of the park
- Nahanni Expansion Working Group formed




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### MAHSI CHO / THANK YOU


- Resources, Wildlife and Economic Development & Dehcho First Nations
- Nah7a Dehé Consensus Team & NNPR Staff
- RWED (YK, Dehcho & Sahtu)
- Yukon Renewable Resources
- Department of Fisheries and Oceans,
- Environment Canada (Canadian Wildlife Service)
- Univ Manitoba, Univ Saskatchewan, Univ Waterloo
- Wildlife Conservation Society
- Wildlife Systems Research





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**Deh Cho Regional Wildlife Workshop**  
October 19, 2004 – Ft. Simpson



Steve Catto  
Nahanni Expansion Working Group


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
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**Dehcho Process and Parks Canada**

- Nah-Deh Consensus Team established in June 2000
- Nah-Deh Consensus Team is the forum through which Nahanni Butte Dene Band, Dehcho First Nations and Parks Canada work together to cooperatively manage Nahanni National Park Reserve
- In 2003, the Nah-Deh Consensus Team prepared a Memorandum of Understanding Respecting Park Expansion





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**Nahanni Expansion Working Group**

- Park Expansion MOU signed by DFN Grand Chief and Minister responsible for Parks Canada in 2003
- Nahanni Expansion Working Group formed in 2004
- NEWG consists of:
  - 2 DFN appointees – Jonas Antoine & Petr Cizek
  - 2 Parks Canada appointees – David Murray & Steve Catto



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**Nahanni Expansion Working Group**

- Nahanni Expansion Working Group will complete work on a feasibility study towards the addition of lands to Nahanni between 2004-2006
- Full consultations with affected Dehcho First Nations and other interested parties will occur in an ongoing manner, especially in 2006-2007
- Nahanni Expansion Working Group will recommend a final boundary for Nahanni to DFN and Parks Canada in 2007

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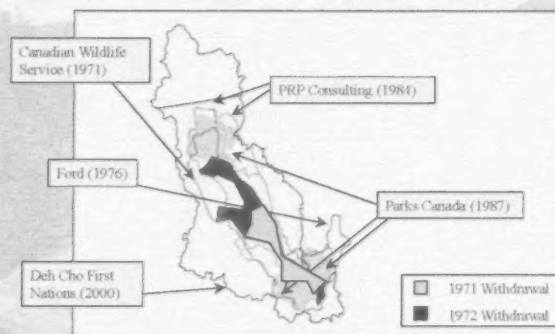
## History of Park Expansion Studies

- There have been 13 individual proposals or recommendations on boundaries since 1963, including:
- 1971 - CWS recommended a 9,583 km<sup>2</sup> park
- 1972 - Land withdrawals resulted in current 4,766 km<sup>2</sup> park reserve
- 1976 - Brooks and Ford recommended addition of Karst lands
- 1984 - PRP recommended 2 options of 14,500 km<sup>2</sup> and 11,000 km<sup>2</sup>
- 1987 - 1<sup>st</sup> Park Management Plan identified 3 main areas of interest, including Tlogotsho Plateau, Ragged Range and Nahanni Karst lands
- 2000 - Dehcho First Nations called for whole South Nahanni watershed



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## History of Boundary Proposals



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## Current Parks Expansion Process

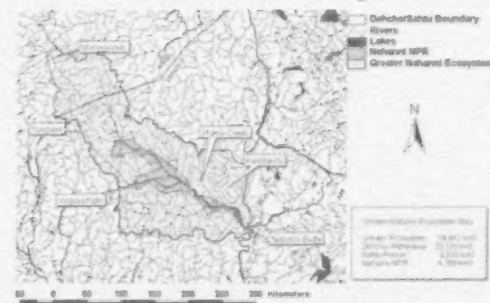
The Nahanni Expansion Working Group will:

- consider all previous proposals
- co-ordinate, and in some cases conduct, new research concerning natural and cultural resources within the Greater Nahanni Ecosystem
- support the Mineral and Energy Resource Assessment
- recommend an amendment to the *Canada National Parks Act* for a new boundary for the expansion of the national park reserve
- move, as part of the Dehcho Process Final Agreement, the national park reserve to full national park status



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## Greater Nahanni Ecosystem



October 13, 2004

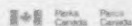


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## NEWG - Park Expansion Priorities

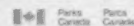
- An expanded Nahanni should:
  - Maintain viable wildlife populations for wide-ranging species
  - Maintain a natural wildfire regime
  - Maintain wilderness quality and spiritual sense of place
  - Contain complete watersheds or sub-watersheds
  - Protect critical wildlife habitat and movement corridors
  - Improve the thematic representation of the Mackenzie Mountains Natural Region



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## NEWG – Research Issues

- Woodland Caribou
- Mountain Goats
- Dall's Sheep
- Wolves
- Invasive & Disjunct Species
- Grizzly Bears
- Traditional Ecological Knowledge (TEK)
- Karst
- Fish
- 3<sup>rd</sup> Party Development & Interests
- Hydrology & Glaciers
- Tourism and Recreational Potential
- Fire History
- Rare & Endemic Species
- Thermal & Mineral Springs



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## 2004 Wildlife Projects

Wildlife work being undertaken this fiscal year includes:

- Cooperative study of woodland caribou with YTG
- Support provided to DFO/Parks Canada survey of bull trout presence and distribution
- Study design for future Dall's sheep and grizzly bear work



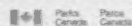
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## Seasonal Distribution and Movement of Woodland Caribou in the GNE

- Cooperative study with Yukon

- 18 satellite collars deployed between October 9-15, 2004

- Monitor movements in south-east Yukon and South Nahanni River watershed



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### Collaboration with Wildlife Conservation Society

- Dr. John Weaver of the Wildlife Conservation Society has been researching grizzlies in the Greater Nahanni Ecosystem since 2002
- Dr. Weaver has established good relationships with First Nations, wildlife management agencies and ENGO's
- The Nahanni Expansion Working Group hopes to work with Dr. Weaver on additional Dall's sheep, grizzly bear, and woodland caribou studies

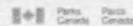


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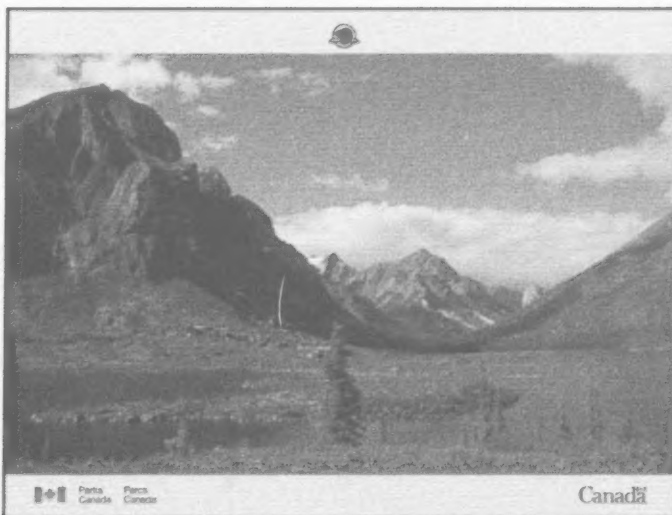


### Moving Forward Through Consultation

- The Nahanni Expansion Working Group will be seeking the input and guidance of various groups including:
  - Dehcho First Nations
  - Sahtu Dene & Metis
  - GNWT – RWED (Deh Cho & Sahtu Regions)
  - Federal Government (EC, DFO, DIAND, NRCan, GSC)
  - Yukon Government (Environment Yukon)
  - ENGO's (CPAWS, WWF)
  - Other Stakeholders and the General Public



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## *Furbearer Populations*

- Climate Change
- Habitat loss / disturbance

### Monitoring

- Fur Auction data
- Small mammals
- Hare density
- Snow track counts
- Carcass collections

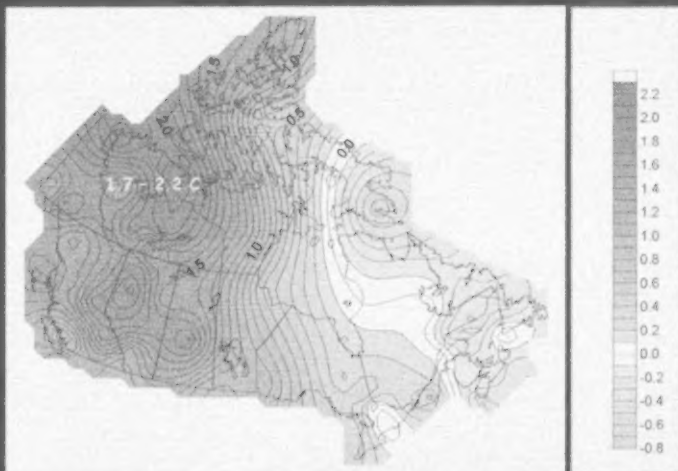


## *Wildlife*

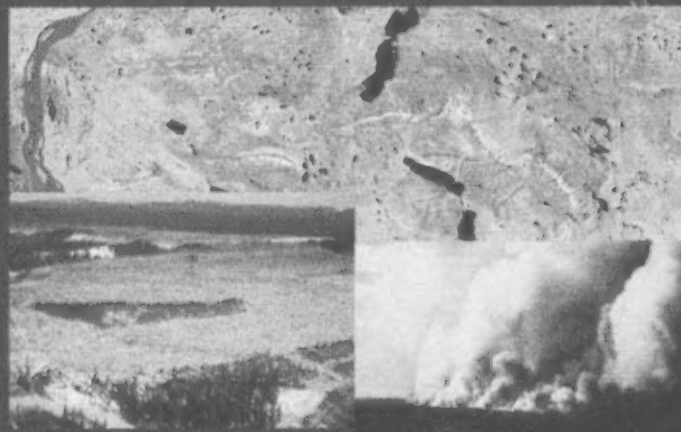
- How are populations distributed?  
How many are there?  
How are they doing?
- Need a basic ecological understanding of how species are doing and fluctuate under "natural" conditions
- Unclear how global warming will impact various species
- Need to better understand the impacts of increasing forms of human activity (Cumulative Effects)
- Difficult to distinguish between the effects of environmental variation and human activities



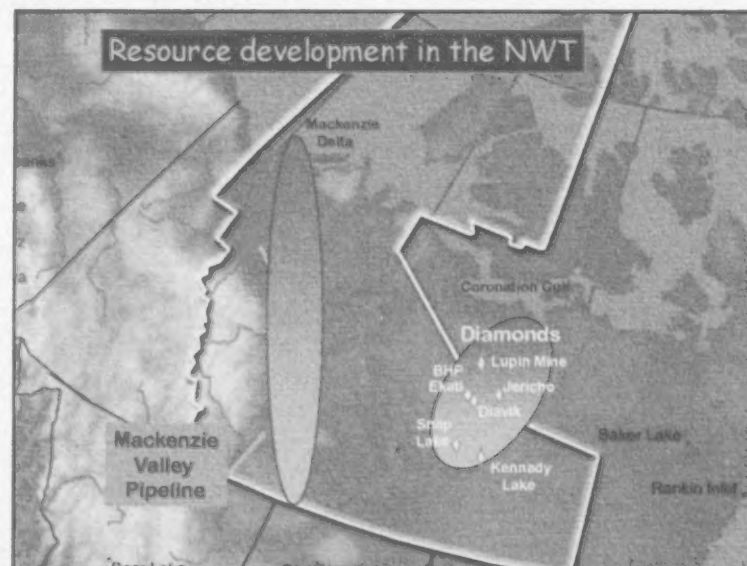
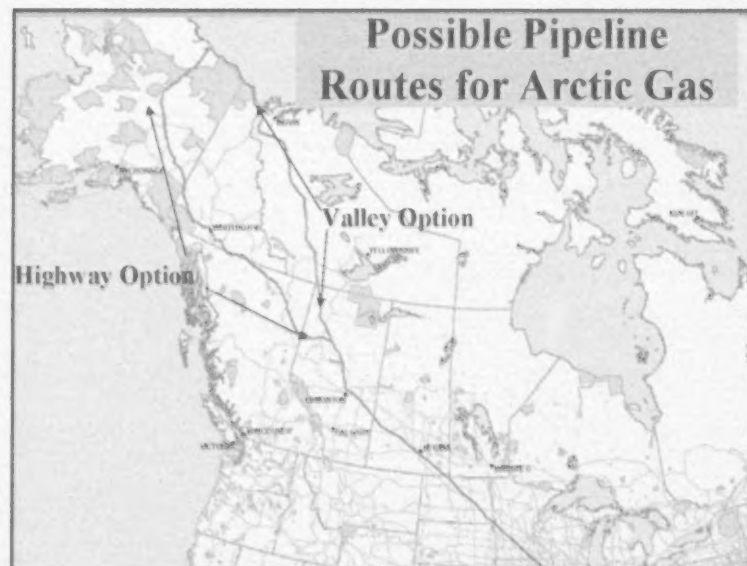
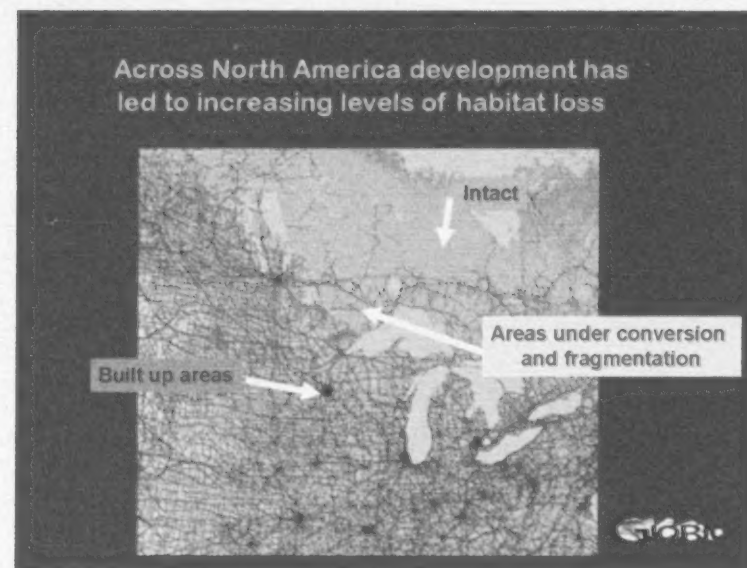
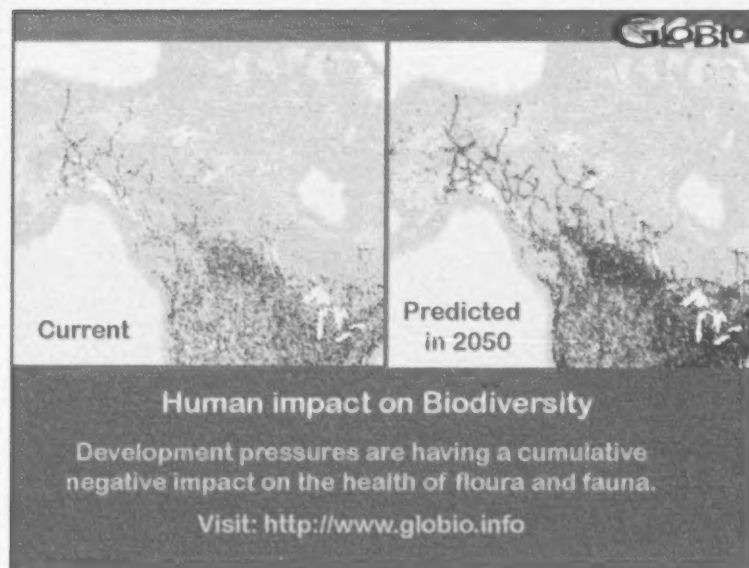
## Climate trends 1948-2000



A warming climate will likely lead to drier conditions and more forest fires







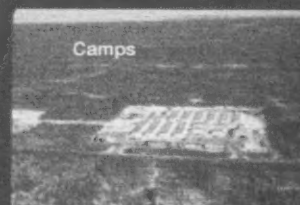
Resource development along the Mackenzie Valley  
will only not be limited to pipeline construction



Exploration & resource development  
will also bring more . . .



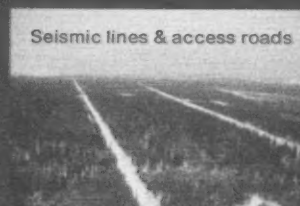
Road construction



Camps

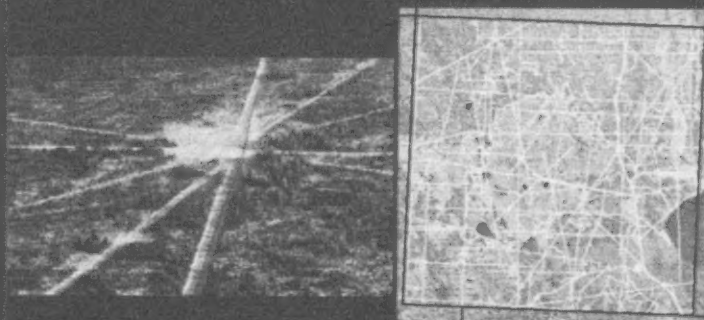


Logging activity



Seismic lines & access roads

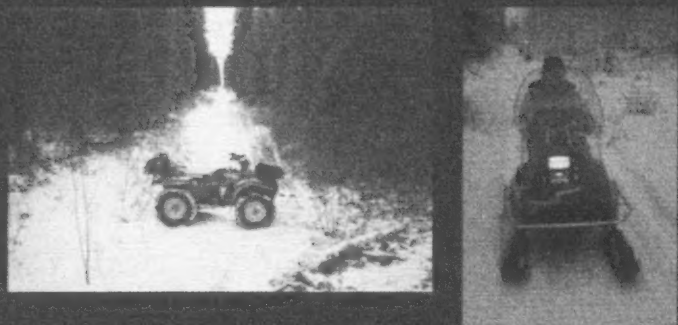
How will wildlife respond to habitat changes and  
fragmentation caused by seismic lines and  
access roads?



How will ungulates and wolves respond to  
pipelines, seismic lines and roads?



What impact will increased hunting and trapping access to remote areas have on wildlife populations?

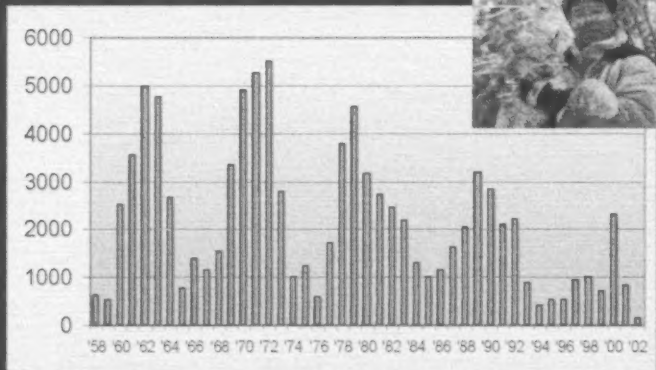


## Monitoring

- Fur Auction data
- Small mammals
- Hare density
- Snow track counts
- Carcass collections



## NWT lynx pelts sold at auction (1958-2002)



## Lynx pelt measurements

Pelts measured prior to going to auction.

Young of the year typically measure less than 89 cm.

A low level of young of the year in the harvest indicates poor kit survival.

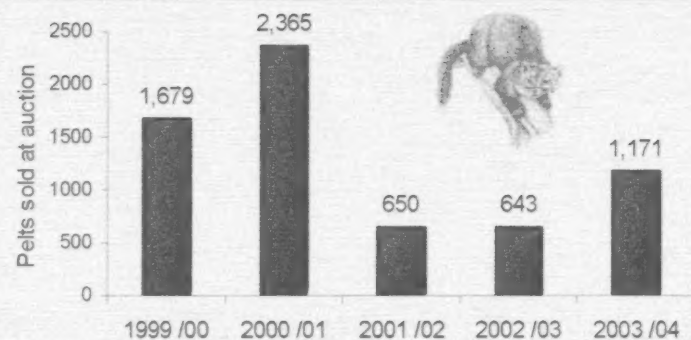
During periods of low hare abundance, reduced lynx trapping pressure leaves more breeding pairs available – once hare numbers recover.



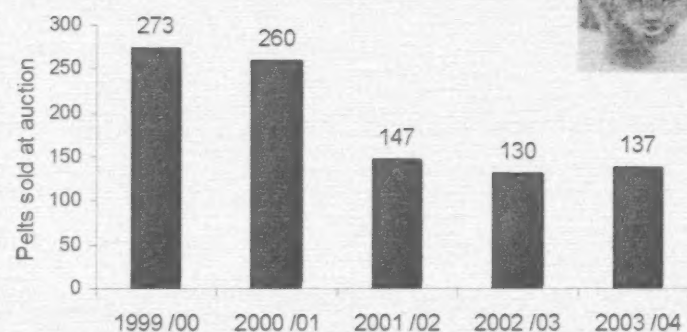




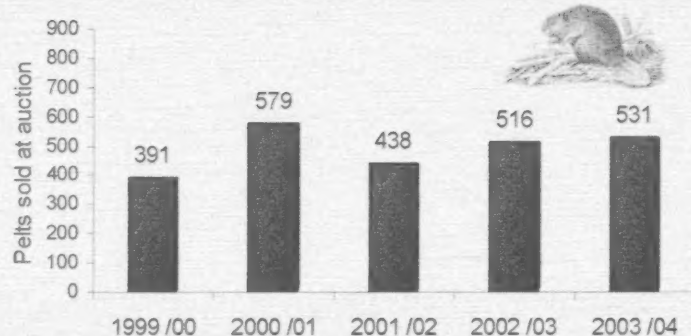
### Deh Cho harvest - Marten



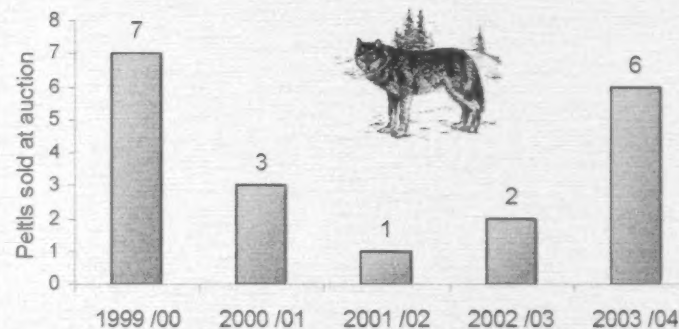
### Deh Cho harvest - Lynx



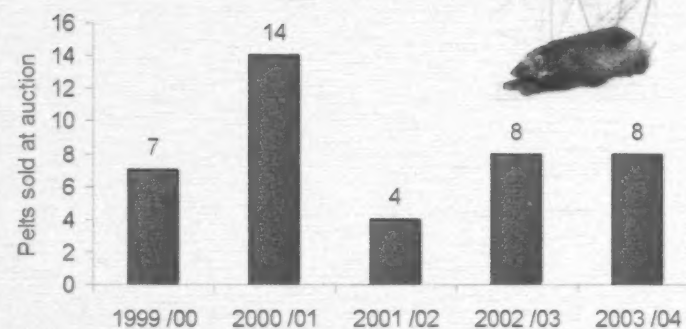
### Deh Cho harvest - Beaver



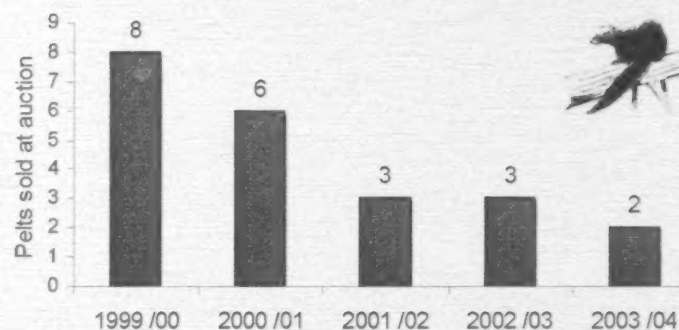
### Deh Cho harvest - Wolf



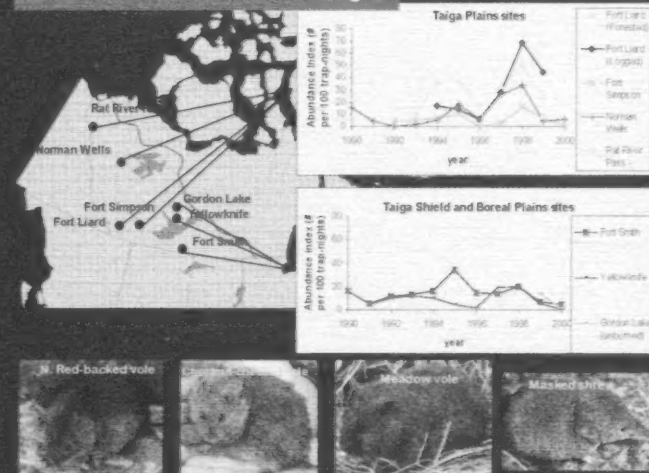
### Deh Cho harvest - Wolverine



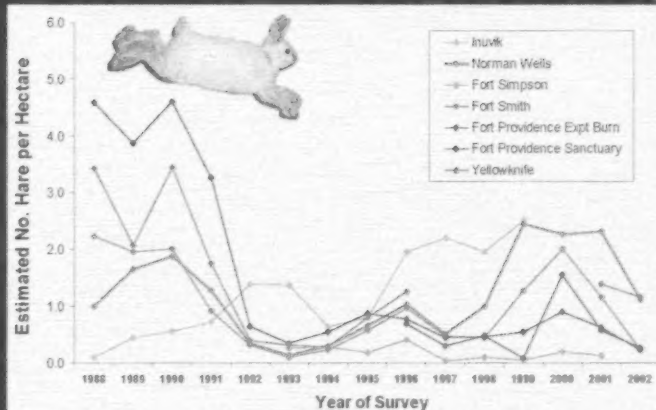
### Deh Cho harvest - Fisher



### Small Mammal surveys



## Hare density (based on pellet counts)



## Snow track counts

- Annual surveys
- Index relative abundance



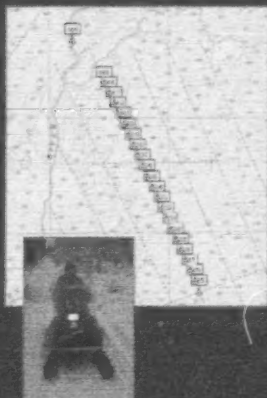
## Snow track counts

Sample representative habitats

Use areas with limited trapping and minimal disturbance

Long-term monitoring of annual changes (trends) in abundance

Useful to index small mammals, squirrels, hare, weasel, lynx, mink & marten



## Carcass collections

- Distribution and patterns of harvest
- Age and sex ratio of the harvest
- Body and reproductive condition
- Winter diet (stomach contents)
- Optimize long-term harvesting opportunities

- Wolverine
- Fisher



RWED strives to help trappers to harvest  
furbearers on a sustainable basis and optimize  
long-term harvesting opportunities.



Small mammal surveys

Snow track surveys

Carcass collection

- Wolverine
- Fisher

Resources, Wildlife and Economic Development  
investing in our future

